State of Montana
Department of Environmental Quality
Helena, Montana 59620

AIR QUALITY OPERATING PERMIT NUMBER OP2161-01

Significant Modification Application Received: **July 9, 2003**
Application Deemed Administratively Complete: **September 2, 2003**
Application Deemed Technically Complete: **September 18, 2003**
AFS Number: **030-013-0004A**

Draft Issue Date: **May 5, 2004**
Proposed Issue Date: **August 11, 2004**
End of EPA 45-day Review: **September 27, 2004**
Date of Decision: **September 29, 2004**
Effective Date: **October 30, 2004**
Expiration Date: **November 20, 2006**

In accordance with the Montana Code Annotated sections 75-2-217 and 218, and the Administrative Rules of Montana (ARM) Title 17, Chapter 8, Subchapter 12, Operating Permit Program, ARM 17.8.1201, *et seq*.,

Montana Refining Company
NE¼, Section 1, Township 20 North, Range 3 East, Cascade County
1900 10th Street Northeast
Great Falls, MT 59404

hereinafter, referred to as MRC, is authorized to operate a stationary source of air contaminants consisting of the emission units described in this permit. Until this permit expires or is modified or revoked, MRC is allowed to discharge air pollutants in accordance with the conditions of this permit. All conditions in this permit are federally and state enforceable unless otherwise specified. Requirements that are state only enforceable are identified as such in the permit. A copy of this permit must be kept on site at the above named facility.

Issued by the Department of Environmental Quality

_____ _____

Signature Date

Permit Issuance and Appeal Process: In accordance with ARM 17.8.1210(j), the Department of Environmental Quality's (Department) decision regarding issuance of an operating permit is not effective until 30 days have elapsed from the date of the decision issued Sptember 29, 2004. The decision may be appealed to the Board of Environmental Review by filing a request for a hearing within 30 days after the date of decision. If no appealed is filed then the Department will send notification and a final permit cover page to be attached to this document stating that the permit is final. In addition, ARM 17.8.1233 allows for any person to petition the Environmental Protection Agency (EPA) within 60 days after the expiration of EPA's 45-day review period to object to issuance of this operating permit. If EPA objects to the operating permit as a result of a petition prior to the Department's notification of a final permit, MRC and all affected parties will be informed of the stay of a final permit. If the Department has already notified MRC and all affected parties, the Department shall issue a revised permit according to ARM 17.8.1231. Questions regarding the final issuance date and status of appeals should be directed to the Department at (406) 444-3490.

Montana Air Quality Operating Permit
Department of Environmental Quality
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Terms not otherwise defined in this permit, or in the Definitions and Abbreviations Appendix of this permit, have the meaning assigned to them in the referenced regulations.

SECTION I GENERAL INFORMATION

The following general information is provided pursuant to ARM 17.8.1210(1).

Company Name: Montana Refining Company (MRC)

Mailing Address: 1900 10th Street Northeast

City: Great Falls State: MT Zip: 59404

Plant Location: NE¼, Section 1, Township 20 North, Range 3 East, Cascade County

Responsible Official: Leland Griffin Phone: 406-761-4100

Alternate Responsible Official: Dana Leach Phone: 406-761-4100

Facility Contact Person: Dexter Busby Phone: 406-761-4100

Primary SIC Code: 2911

Nature of Business: Refining Hydrocarbons

Description of Process: MRC operates a refinery in Great Falls, Montana. The general nature of business is to refine petroleum hydrocarbons into sellable products.

SECTION II SUMMARY OF EMISSION UNITS

The emission units regulated by this permit are the following (ARM 17.8.1211):

Emission Unit ID	Description	Pollution Control Device/Practice
EU01	**PLANT WIDE EMISSIONS**	None
EU02	**CRUDE UNIT**	
EU02a	Crude Furnace (sour fuel gas)	None
EU02b	Vacuum Heater (sour fuel gas)	None
EU02c	Standard Gas Valves	None
EU02d	Standard Light Valves	None
EU02e	Drains	None
EU02f	Old Sour Water Stripper (SWS)	None
EU03	**CATALYTIC POLY UNIT**	
EU03a	Cat Poly Unit Valves	None
EU04	**FLUID CATALYTIC CRACKING UNIT (FCCU)**	
EU04a	FCC Regenerator (process generated)	None
EU04b	FCC Preheater (sweet fuel gas)	None
EU04c	Standard Gas Valves	None
EU04d	Standard Light Valves	None
EU04e	Pumps Light	None
EU005	**CATALYTIC REFORMER UNIT**	
EU05a	Reformer Heater (sweet fuel gas)	None
EU05b	Naphtha Heater (sweet fuel gas)	None
EU05c	Standard Gas Valves	None
EU05d	Standard Light Valves	None
EU05e	Kerosene Heater (sweet fuel gas)	None
EU05f	Naptha HDS Unit	None
EU05g	Kerosene HDS Unit	None
EU06	**STORAGE LOADOUT UNIT**	
EU06a	Product Loadout Facilities	None
EU06b	Pumps	None
EU06c	Storage LPG	None
EU06d	Standard Light Valves	None
EU06e	Storage Tank Farm	Floating Roofs
EU06f	Tanks Light	None
EU07	**UTILITY UNIT**	
EU07a	Wastewater Treatment Plant	None
EU07b	Boilers #1& #2 (sour fuel gas)	None
EU07c	Standard Gas Valves	None
EU08	**ALKYLATION UNIT**	
EU08a	Deisobutanizer Reboiler (sweet fuel gas)	None
EU08b	Standard Light Valves	None
EU08c	Pumps Light	None
EU08d	Oily Water Separator	None
EU09	**HYDROGEN PLANT**	
EU09a	Hydrogen Plant Reformer Furnace Stack (natural gas)	None
EU10	**GASOLINE LOADING RACK**	
EU10a	Gasoline Loading Rack	VCU
EU10b	Vapor Combustion Unit (VCU)	None
EU11	**POLYMER-MODIFIED ASPAHLT (PMA) UNIT**	None
EU12	**COOLING TOWERS**	None
EU13	**SODIUM HYDROSULFIDE (NaHS) UNIT**	None
EU14	**DIESEL/GAS HYDROTREATER (HTU) UNIT (natural gas)**	None

SECTION III PERMIT CONDITIONS

The following requirements and conditions are applicable to the facility or to specific emission units located at the facility (ARM 17.8.1211, 1212, and 1213).

A. Facility-Wide

Conditions	Rule Citation	Rule Description	Pollutant/Parameter	Limit
A.1	ARM 17.8.106	Testing Requirements	Testing Requirements	-------
A.2	ARM 17.8.304(1)	Visible Air Contaminants	Opacity	40%
A.3	ARM 17.8.304(2)	Visible Air Contaminants	Opacity	20%
A.4	ARM 17.8.304(3)	Visible Air Contaminants	Opacity	60%
A.5	ARM 17.8.308(1)	Particulate Matter, Airborne	Fugitive Opacity	20%
A.6	ARM 17.8.308(2)	Particulate Matter, Airborne	Reasonable Precautions	-------
A.7	ARM 17.8.308	Particulate Matter, Airborne	Reasonable Precaution, Construction	20%
A.8	ARM 17.8.309	Particulate Matter, Fuel Burning Equipment	Particulate Matter	$E = 0.882 * H^{-0.1664}$ or $E = 1.026 * H^{-0.233}$
A.9	ARM 17.8.310	Particulate Matter, Industrial Processes	Particulate Matter	$E = 4.10 * P^{0.67}$ or $E = 55 * P^{0.11} - 40$
A.10	ARM 17.8.322(4)	Sulfur Oxide Emissions, Sulfur in Fuel	Sulfur in Fuel (liquid or solid fuels)	1 lb/MMBtu fired
A.11	40 CFR 61, Subpart FF	National Emissions Standards for Benzene Waste Operations	Petroleum Refinery Wide	-------
A.12	40 CFR 63, Subpart CC	National Standards for Hazardous Air Pollutants for Petroleum Refineries	Petroleum Refinery Wide	-------
A.13	ARM 17.8.1212	Reporting Requirements	Compliance Monitoring	-------
A.14	ARM 17.8.1207	Reporting Requirements	Annual Certification	-------
A.15	ARM 17.8.749	Reporting Requirements	Quarterly Emission Reports	-------

Conditions

A.1. Pursuant to ARM 17.8.106, all emission source testing, sampling and data collection, recording analysis, and transmittal must be performed, maintained, and reported in accordance with the Montana Source Test Protocol and Procedures Manual (dated July 1994 unless superseded by rulemaking), unless alternate methods are approved by the Department.

A.2 Pursuant to ARM 17.8.304(1), MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

A.3. Pursuant to ARM 17.8.304(2), MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

A.4. Pursuant to ARM 17.8.304(3), during the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes.

A.5. Pursuant to ARM 17.8.308(1), MRC shall not cause or authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control emissions of particulate matter (PM) are taken. Such emissions of airborne PM from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

A.6. Pursuant to ARM 17.8.308(2), MRC shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne PM, unless otherwise specified by rule or in this permit.

A.7. Pursuant to ARM 17.8.308, MRC shall not operate a construction site or demolition project unless reasonable precautions are taken to control emissions of airborne PM. Such emissions of airborne PM from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

A.8. Pursuant to ARM 17.8.309, unless otherwise specified by rule or in this permit, MRC shall not cause or authorize PM, caused by the combustion of fuel, to be discharged from any stack or chimney into the outdoor atmosphere in excess of the maximum allowable emissions of PM for existing fuel-burning equipment and new fuel-burning equipment calculated using the following equations:

For existing fuel-burning equipment (installed before November 23, 1968):
$E = 0.882 * H^{-0.1664}$
For new fuel-burning equipment (installed on or after November 23, 1968):
$E = 1.026 * H^{-0.233}$

Where H is the heat input capacity in million Btu (MMBtu) per hour and E is the maximum allowable particulate emissions rate in pounds per MMBtu.

A.9. Pursuant to ARM 17.8.310, unless otherwise specified by rule or in this permit, MRC shall not cause or authorize PM to be discharged from any operation, process, or activity into the outdoor atmosphere in excess of the maximum hourly allowable emissions of PM calculated using the following equations:

For process weight rates up to 30 tons per hour: $E = 4.10 * P^{0.67}$
For process weight rates in excess of 30 tons per hour: $E = 55.0 * P^{0.11} - 40$

Where E is the rate of emissions in pounds per hour and P is the process weight rate in tons per hour.

A.10. Pursuant to ARM 17.8.322(4), MRC shall not burn liquid or solid fuels containing sulfur in excess of one pound per million BTU fired, unless otherwise specified by rule or in this permit.

A.11. MRC shall comply with all applicable standards and limitations, and the reporting, record-keeping, and notification requirements, as required, by 40 CFR 61, Subpart FF, National Emissions Standards for Benzene Waste Operations included in Appendix N of this permit (ARM 17.8.341 and 40 CFR Part 61, Subpart FF). If at anytime from the Date of Lodging of the Consent Decree MRC is determined to have a total annual benzene (TAB) equal to or greater than 10 Mg/yr, MRC, as applicable, shall comply with the compliance option set forth at 40 CFR 61.342(e).

A.12. MRC shall comply with all applicable standards and limitations, and the reporting, record-keeping, and notification requirements, as required, by 40 CFR 63, Subpart CC, National Standards for Hazardous Air Pollutants (HAP) for Petroleum Refineries (ARM 17.8.343 and 40 CFR Part 63, Subpart CC).

A.13. On or before February 15 and August 15 of each year, MRC shall submit to the Department the compliance monitoring reports required by Section V.D. These reports must contain all information required by Section V.D, as well as the information required by each individual emissions unit. For the reports due by February 15 of each year, MRC may submit a single report, provided that it contains all the information required by Section V.B & V.D. Per ARM 17.8.1207,

> *any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12 (including semiannual monitoring reports), shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that,* ***"based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete."***

A.14. By February 15 of each year, MRC shall submit to the Department the compliance certification report required by Section V.B. The annual certification report required by Section V.B must include a statement of compliance based on the information available, which identifies any observed, documented or otherwise known instance of noncompliance for each applicable requirement. Per ARM 17.8.1207,

> *any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12 (including annual certifications), shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that,* ***"based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete."***

A.15. Quarterly, MRC shall submit a consolidated emissions report and Quality Assurance/Quality Control (QA/QC) results, in one document, to the Department. The report may be in hard and electronic form with the electronic format in ASCII and with a template of each set of data. The quarterly emission report shall be submitted to the Department with the compliance monitoring report on or before January 31 and July 31 and, additionally, on or before April 30 and October 31.

B. EU01 – PLANT WIDE LIMITATIONS

EU01 - Plant-Wide Refinery

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
B.1, B.10, B.12, B.23, B.24, B.32, B.34	SO_2	1515 TPY	FCC Unit testing	Every 2 yrs	Quarterly
B.2, B.10, B.12, B.23, B.24, B.33, B.34	SO_2	4.41 TPD Apr1 - Oct. 31 4.15 TPD Nov. 1 - Mar 31	H_2S monitor	Semiannual	
			FCC Unit testing	Every 2 yrs	Semiannual
B.3, B.11, B.12, B.23, B.34	CO	4700 TPY & 12.9 TPD	Method 10 on major facility units	As required by the Department and Section III.A.1	
			FCC Unit testing	Every 2 yrs	
B.4, B.13, B.25, B.33	Refinery Flare	Emergency use only	Notification	> Minor flaring event occurs	Quarterly
B.5, B.14, B.26, B.33	Pressure vessels	Vented to the flare	Verification	Semiannual	Semiannual
B.6, B.15, B.27, B.33	Small refinery	<10,000 BPD	Logging	Daily	Quarterly
B.7, B.16, B.18, B.19, B.20, B.21, B.28, B.29, B.31, B.32, B.33, B.34	Sour fuel gas H_2S monitor	Operate and Maintain	QA/QC, CGAs	App. H&M-Quarterly	
			GC	Every 4 hours H_2S monitor is out of range	
			SOP/QA manual	W/in 180 days of permit issuance	One time report
B.8, B.17, B.30, B.33, B.34	Sweet fuel gas streams	Reformer stabilizer overhead, natural gas, propane, and butane	Verification	Semiannual	Semiannual
B.9, B.22, B.32, B.33	Ambient Air Monitoring Plan	In accordance w/ Appendix E	In accordance w/ Appendix E	In accordance w/ Appendix E	Quarterly

Conditions

B.1. MRC shall be limited to a maximum of 1515 tons/year (TPY) of sulfur dioxide (SO_2) (ARM 17.8.749).

B.2. MRC shall be limited to 4.41 tons/day (TPD) of SO_2 April 1st through October 31st and 4.15 TPD of SO_2 November 1st through March 31st (ARM 17.8.749).

B.3. MRC shall be limited to 4700 TPY of carbon monoxide (CO) and 12.9 TPD of CO (ARM 17.8.749).

B.4. The refinery flare shall be utilized for emergency use only (ARM 17.8.749). MRC shall notify the Department if a flaring event is greater than a minor flaring event. A minor flaring event is a flaring event that emits less than or equal to 300-lb/3-hr of SO_2 (ARM 17.8.1212 and 17.8.1213).

B.5. All pressure vessels in Hydrofluoric (HF) acid service, except storage tanks, shall be vented to the flare system (ARM 17.8.749).

B.6. MRC shall be limited to processing 10,000-barrels per day (BPD) of crude, averaged over a 12-month rolling period (ARM 17.8.322(5)).

B.7. MRC shall operate and maintain the current sour gas hydrogen sulfide (H_2S) concentration monitor nearest the outlet of the sour fuel gas surge drum D-0724 (ARM 17.8.1212 and 17.8.1213).

B.8. MRC shall be limited to the following sweet gas streams that are fed to the sweet fuel gas surge drum D-0725 unless MRC notifies the Department of another qualifying stream (ARM 17.8.1212 and 17.8.1213):

a. Reformer stabilizer overhead;

b. Natural gas;

c. Propane; and

d. Butane.

B.9. MRC shall conduct ambient air monitoring as described in Appendix E of this permit (ARM 17.8.749).

Compliance Demonstration

B.10. Compliance with the plant-wide SO_2 emission limitations contained in Sections III.B.1 and 2 shall be monitored using the summation of the following (ARM 17.8.1213):

a. Calculated emissions from the Hydrotreater Unit sour water stripper (HTU SWS) and the old SWS required by Section III.C.5, the Crude unit;

b. Data from the sour refinery fuel gas system continuous H_2S concentration monitor and continuous fuel gas flow rate meters required by Sections III.C.5, III.H.14, the Crude unit and Boilers; and

c. FCCU actual fresh feed and recycle rates barrels per hour (BPH) and the emission factor pounds per barrel (lb/bbl) developed from the SO_2 CEM data, or another Department approved method.

B.11. As required by the Department, MRC shall perform a Method 10 test on each major CO emitting unit, as determined by the Department, in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105).

B.12. The Fluid Catalytic Cracking Unit (FCCU) shall be tested for SO_2 and CO and the results submitted to the Department in order to monitor compliance with the emission limits contained in Sections III.B.1, 2 and 3. The testing shall occur in 2004 and continue on a 2-year basis, or according to another testing schedule as approved by the Department, in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

B.13. For the purposes of determining whether a flaring event greater than 300-lb/3-hour period has occurred, MRC shall maintain records of activities, other than de minimis activities, that result in SO_2 emissions from the flare and all other emitting units (ARM 17.8.1213).

De minimis activities include, but are not limited to, the sweet gas streams, natural gas streams, propane, butane, and Liquefied Petroleum Gas (LPG) streams, and hydrogen streams.

B.14. MRC shall verify that all pressure vessels in HF Acid service, except storage tanks, are vented to the flare (ARM 17.8.1213).

B.15. MRC shall maintain a log of the BPD of crude oil processed (ARM 17.8.1213).

B.16. MRC shall verify that the sour gas H_2S concentration monitor is maintained nearest the outlet of the sour fuel gas storage drum D-0724 (ARM 17.8.1213).

B.17. MRC shall monitor compliance with the sweet gas streams by demonstrating compliance with each of the following individual streams, unless another method is approved by the Department (ARM 17.8.1213):

a. MRC shall verify that the reformer stabilizer overheads are sent to the sweet gas surge drum;

b. MRC shall verify that the natural gas meets the specifications of commercially available natural gas; and

c. MRC shall verify that the propane and butane streams meet LPG commercial grade specifications for sulfur content and conduct a weekly gas chromatograph analysis determining the H_2S content of the fuels.

B.18. The sour gas flow meters shall meet the QA/QC requirements contained in Appendix G of this permit or another Department approved method. MRC shall perform quarterly cylinder gas audit (CGAs) on the sour H_2S concentration monitor, that shall include two points with the outside point being no greater than 5%, and shall meet the requirements of 40 Code of Federal Regulations (CFR) 60, Appendix F, or another Department approved method (ARM 17.8.1213).

B.19. MRC shall conduct daily calibration checks on the sour H_2S concentration monitor to check the linearity of the monitor. The calibration checks shall be conducted to include two points with the outside number being no greater than 5%, or another Department approved method (ARM 17.8.1213).

B.20. MRC shall collect a sample of sour fuel gas within 1 hour of determining the sour gas H_2S monitor is out of range and conduct a gas chromatograph (GC) analysis on the sample. After the initial sample, MRC shall collect samples and conduct analysis, as described above, every 4 hours until the monitor has returned to valid conditions (ARM 17.8.1213).

B.21. MRC shall maintain Standard Operating Procedure (SOP)/QA manuals for the GC sampling and analysis, and submit any revisions to the Department within 30 days (ARM 17.8.1213).

B.22. Compliance monitoring with the ambient air monitoring shall be as required by Appendix E of this permit (ARM 17.8.1213).

Recordkeeping

B.23. MRC shall complete the recordkeeping, as required by Section III.B.10 (ARM 17.8.1212).

B.24. Method 10 FCCU test reports must be maintained on site and must be submitted to the Department in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

B.25. MRC shall maintain the flaring records on site, as specified in Section III.B.13, notify the Department of events greater then minor flaring events, and submit the records to the Department upon request. The records shall include the following for each flaring event (ARM 17.8.1212):

a. The time of the event;

b. The duration of the event;

c. The amount of material flared during the event; and

d. The cause for the event.

B.26. No recordkeeping is necessary for the compliance demonstration contained in Section III.B.14 (ARM 17.8.1212).

B.27. MRC shall maintain the on site record, as specified in Section III.B.15. The record must include the date, time, and the BPD (ARM 17.8.1212).

B.28. MRC shall maintain records in accordance with 40 CFR 75, Subpart D for data replacement purposes. Data replacement shall include, but is not limited to, the following requirements unless another method is approved by the Department (ARM 17.8.1212):

a. §75.32 and §75.33 Table1 and Table 2 for standards for missing data procedures; and

b. MRC may use zero when the monitor is down and the facility is on natural gas.

B.29. No recordkeeping is necessary to verify compliance with Section III.B.16 and B.17 (ARM 17.8.1212).

B.30. All source test recordkeeping shall be performed in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

B.31. MRC shall maintain records of all sampling and analysis completed when the H_2S monitor is operating out of range. The records shall include the time, date, initials of those conducting the sampling and analysis, and results of the sampling and analysis (ARM 17.8.1212).

B.32. MRC shall keep records in accordance with the requirements of Appendix E, G of this permit; 40 CFR 75, Subpart D; and 40 CFR 60, Appendix F (ARM 17.8.1212).

Reporting

B.33. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements. The semiannual and quarterly reporting, as required by Sections III.A.13 and 15, shall provide (ARM 17.8.1212):

a. Semiannually, a summary of results of the last source testing that was performed as required, by Sections III.B.11 and B.12;

b. Quarterly, a summary of the records required for the flaring events that are required by Section III.B.25;

c. Semiannually, verification that the pressure vessels are vented to flare, as required, by Section III.B.5;

d. Quarterly, a summary of the process logs, as required, by Section III.B.15;

e. Semiannually, verification that the sour gas fuel monitor is maintained;

f. Semiannually, verification that the natural gas meets the specifications of commercially available natural gas;

g. Semiannually, verification that the reformer stabilizer overheads are sent to the sweet gas surge drum;

h. Quarterly, the QA/QC, quarterly CGAs and annual linearity accuracy testing for the H_2S monitor;

i. Quarterly, a summary of the GC analysis when the H_2S operated out of range, if any were completed during the previous quarter;

j. Quarterly, a summary of any revisions to the SOP/QA manual for the GC; and

k. Quarterly, a report of SO_2 and nitrogen oxides (NO_x) emissions, each as one value for all heaters in pounds per day (lb/day).

B.34. MRC shall provide quarterly reports, as required by Section III.A.15, using the data collected as required above, that will monitor compliance with the plant-wide emission limits. The quarterly reports shall include the following (ARM 17.8.1212):

a. FCCU catalyst recirculation rates (TPH), FCCU actual fresh feed rates (BPD), FCCU recycle rates (BPD), and the SO_2 Continuous Emission Monitoring (CEM) data or another Department approved method;

b. Emission estimates for SO_2 from the FCCU actual fresh feed and recycle rates (BPD) and the SO_2 CEM data or another Department approved method;

c. Report the sum of SO_2 emissions for each month of the quarter;

d. Operating times for the old SWS unit during the reporting period;

e. All chemical analysis of the old SWS unit wastewater stream, as required by Appendix F of this permit;

f. The total hourly flow rates of wastewater flow into the old SWS unit, as required by Appendix F of this permit;

g. Emission estimates for SO_2 in lb/day from material balance, engineering calculation data as described in Appendix F of this permit;

h. Emission estimates for NO_x from material balance, engineering calculation data as described in Appendix F of this permit; the NO_x emission rate shall be reported as an hourly average (lb/hr);

i. Emission estimates for NO_x from actual fuel burning rates and the NO_X CEM data; the NO_x emission rates shall be reported as lb/hr;

j. Report the total NO_x emissions in lb/day from the incineration of the wastewater streams from the old SWS and from fuel gas firing for each month of the quarter; and

k. Monitoring downtime that occurred during the reporting period.

C. EU02 – CRUDE UNIT

EU02a – Crude Furnace (sour fuel gas) **EU02b – Vacuum Heater (sour fuel gas)**
EU02c – Standard Gas Valves **EU02d – Standard Light Valves**
EU02e – Drains **EU02f – Old Sour Water Stripper (SWS)**

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
C.1, C.2, C.10, C.17, C.23	Opacity	20%/40%	Method 9	As required by the Department and Section III.A.1	Semiannual
C.3, C.11, C.18, C.23	Sulfur in fuel (liquid or solid)	1 lb/MMBtu	Verification of non-use	Ongoing	
C.4, C.12, C.18, C.23	Crude Stack Height	150 ft	Verification	Semiannual	
C.5. C.13, C.19, C.23	Inlet waste stream of Old SWS	Analyze	4500-S^2-D/4500S^2-E for H_2S & 4500-NH_3 for NH_3	Twice weekly	Quarterly
C.6, C.14, C.20, C.23	Gas flow rate meters	Install & operate	Inspect & audit	Quarterly	
C.7, C.15, C.21, C.23	Equipment Leaks	40 CFR 63.648	40 CFR 63.654	40 CFR 63.654	40 CFR 63.654
C.8, C.15, C.21, C.23	Misc Process Vents	40 CFR 63.643	40 CFR 63.644&645	40 CFR 63.644&645	40 CFR 63.644&645
C.9, C.16, C.22, C.23	Heaters and Boilers	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60, Subpart J	Semiannual

Conditions

C.1. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the vacuum heater, that exhibits an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

C.2. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the crude furnace, valves, drains, and Old SWS, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

C.3. MRC shall not burn liquid or solid fuels containing sulfur in excess of one pound per million Btu (lb/MMBtu) fired (ARM 17.8.322(4)).

C.4. The crude stack height shall be at least 150-feet above ground level (ARM 17.8.749).

C.5. MRC shall analyze the inlet waste stream of the Old SWS unit (ARM 17.8.749).

C.6. MRC shall install and operate continuous fuel gas flow rate meters for the vacuum heater and for the crude heater. Flowmeters shall be equipped with a data acquisition system and shall be used in conjunction with the H_2S monitor to calculate sulfur emissions from the vacuum heater and the crude heater (ARM 17.8.749).

C.7. MRC shall comply with the requirements of 40 CFR 63.648 for equipment (ARM 17.8.342 and 40 CFR 63, Subpart CC).

C.8. MRC shall comply with the requirements of 40 CFR 63.643 for Miscellaneous Process Vents (ARM 17.8.342 and 40 CFR 63, Subpart CC).

C.9. MRC shall comply with all applicable requirements of 40 CFR, Part 60, Standards of Performance for New Stationary Sources, Subpart J-Standards of Performance for Petroleum Refineries. These regulations shall apply to heaters and boilers and any other equipment, as appropriate. By no later than December 31, 2006, MRC shall install, certify, calibrate, maintain, and operate a fuel gas CEMS in accordance with the requirements of 40 CFR §§ 60.11, 60.13, and Part 60 Appendix A, and the applicable performance specification test of 40 CFR Part 60 Appendices B and F (MRC Consent Decree).

Compliance Demonstration

C.10. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be a minimum of 6 minutes, unless any one reading is 20% to 40% or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

C.11. MRC shall monitor compliance with Section III.C.3 by verifying that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired in the crude furnace and the vacuum heater (ARM 17.8.1213).

C.12. MRC shall notify the Department if the crude stack height differs from 150-feet above ground level (ARM 17.8.1213).

C.13. Old SWS

a. MRC shall analyze the inlet wastewater streams of the Old SWS unit for H_2S and ammonia (NH_3) concentrations in accordance with standard Methods for the Examination of Water and Wastewater, latest edition, 4500-S^{2-}D/4500S^{2-}E for H_2S and 4500-NH_3 for NH_3, or an equivalent test method as approved by the Department. The chemical analysis frequency for the Old SWS unit shall be twice weekly when operating. The inlet wastewater stream flow rate shall be continuously monitored and recorded by a flow rate meter. The outlet wastewater stream flow rate shall be assumed to be equivalent to the inlet flow rate and the effluent concentration will be assumed to be zero for calculating emissions. Emissions of SO_2 and NO_x from the incineration of wastewater gases in the crude unit shall be determined by utilizing the engineering measurement procedures outlined in Appendix F of this permit (ARM 17.8.749 and 17.8.1213).

b. MRC shall inspect and audit the Old SWS unit flow rate monitor quarterly. MRC shall maintain a standard operating procedures manual and a quality assurance plan for the Old SWS unit flow rate monitor. Any revisions to the standard operating procedures manual and QA plan for the Old SWS shall be submitted to the Department for approval. MRC shall conduct these audits using the approved procedures and forms (ARM 17.8.749).

C.14. MRC shall inspect and audit the flow rate monitors quarterly that meet the requirements of Appendix G of this permit. MRC shall conduct these audits using the appropriate procedures and forms (ARM 17.8.342 and 40 CFR 63, Subpart CC).

C.15. MRC shall monitor compliance with the equipment leak and miscellaneous process vents requirements by complying with 40 CFR 63.654, 63.644, and 63.645 (ARM 17.8.342 and 40 CFR 63, Subpart CC).

C.16. MRC shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR Part 60, NSPS, Subpart J, Standards of Performance for Petroleum Refineries. These regulations shall apply to heaters and boilers and any other equipment, as applicable (ARM 17.8.340 and 40 CFR 60, Subpart J).

Recordkeeping

C.17. Method 9 test reports must be maintained on site and must be submitted to the Department upon request in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

C.18. No recordkeeping is required to verify no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired and appropriate stack height, as required by Section III.C.11 and 12 (ARM 17.8.1212).

C.19. MRC shall maintain records for the analysis of the inlet wastewater of the Old SWS as required by Section III.C.13 (ARM 17.8.1212).

C.20. The results of the inspections and audits required by Section III.C.14 shall be included in the quarterly SO_2 and NO_x emission report (ARM 17.8.1212).

C.21. MRC shall meet the recordkeeping requirements for equipment leaks and miscellaneous process vents in accordance with 40 CFR 63.654, 63.644, and 63.645 (ARM 17.8.342 and 40 CFR 63, Subpart CC).

C.22. MRC shall comply with all applicable recordkeeping requirements in accordance with 40 CFR 60, Subpart J, as applicable (ARM 17.8.340 and 40 CFR 60, Subpart J).

Reporting

C.23. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements. The semiannual and quarterly reporting, as required by Sections III.A.13 and 15, shall provide (ARM 17.8.342 and 40 CFR 63, Subpart CC):

a. Semiannually, a summary of the results of any testing that was performed on the crude unit;

b. Semiannually, a verification that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired been in the crude furnace or vacuum heater as required by Section III.C.11;

c. Notification if the crude stack height differs from 150-feet above ground level;

d. Quarterly, a report of the SO_2 and NO_x emission data in lb/day; and

e. Certification of compliance with 40 CFR 63, Subpart CC.

c. Verification that compliance with 40 CFR 60, Subpart J was maintained, as applicable.

D. EU03 – CATALYTIC POLY UNIT

EU03a - Cat Poly Unit Valves

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
D.1, D.3, D.5, D.7	Opacity	20%	Method 9	As required by the Department	Semiannual
D.2, D.4, D.6, D.7	Equipment Leaks	40 CFR 63.648	40 CFR 63.654	40 CFR 63.654	40 CFR 63.654

Conditions

D.1. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

D.2. MRC shall comply with the requirements of 40 CFR 63.648 for equipment (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Compliance Demonstration

D.3. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be a minimum of 6 minutes, unless any one reading is 20% or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

D.4. MRC shall monitor compliance with the equipment leak requirements by complying with 40 CFR 63.654 (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Recordkeeping

D.5. Method 9 test reports must be maintained on site and must be submitted to the Department upon request in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

D.6. MRC shall meet the recordkeeping requirements for equipment in accordance with 40 CFR 63.654 (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Reporting

D.7. The annual compliance certification report required by Section V.B, must contain a certification statement for the above applicable requirements. The semiannual reporting shall provide a summary of results of the most recent testing that was performed on the Catalytic Poly Unit and a certification of compliance with 40 CFR 63, Subpart CC (ARM 17.8.1212).

E. EU04 – FLUID CATALYTIC CRACKING (FCC) UNIT

EU04a – FCC Regenerator (process generated) **EU04b – FCC Preheater (sweet fuel gas)**
EU04c – Standard Gas Valves **EU04d – Standard Light Valves**
EU04e – Pumps Light

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
E.1, E.2, E.10, E.15, E.25, E.26	Opacity	20%/40%	Method 9	As required by the Department	Semiannual
E.3, E.11, E.18, E.25, E.26	PM	15.0 lb/hr	Method 5	Annually	
E.4, E.12, E.19, E.26	Sulfur in fuel (liquid or solid)	1 lb/MMBtu	Verification of non-use	Ongoing	
E.5, E.13, E.20, E.26	FCC Preheater (sulfur concentration)	160 ppm by volume – dry basis	CEMS	Ongoing	Quarterly
E.6, E.14, E.21, E.26	Equipment Leaks	40 CFR 63.648	40 CFR 63.654	40 CFR 63.654	40 CFR 63.654
E.7, E.15, E.22, E.26	FCC Regenerator	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60, Subpart J	Semiannual
E.8, E.16, E.23, E.25, E.26	SO_2, CO, NO_X, and O_2 CEMS	Must be equipped with CEMS	RATA	Annually	Annually
E.9, E.17, E.24, E.25, E.26	CO	500 ppmvd, corrected to 0% oxygen (O_2) on a 1-hour average basis; and 100 ppmvd, corrected to 0% O_2 on a 365-day rolling average basis.	CEMS	Ongoing	Quarterly

Conditions

E.1. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the FCC Regenerator, that exhibits an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

E.2. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the FCC Preheater, valves, and pumps, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

E.3. The FCCU shall be limited to 15.0 lb/hr of PM (ARM 17.8.749 and Consent Decree).

E.4. MRC shall not burn liquid or solid fuels containing sulfur in excess of 1 lb/MMBtu fired from the FCC Preheater (ARM 17.8.322(4)).

E.5. MRC shall not combust fuel gas with a sulfur concentration in excess of 160-parts per million (ppm) by volume on a dry basis in the FCC Preheater (ARM 17.8.749).

E.6. MRC shall comply with the requirements of 40 CFR 63.648 for equipment (40 CFR 63, Subpart CC).

E.7. MRC shall comply with all applicable requirements of 40 CFR, Part 60, Standards of Performance for New Stationary Sources, Subpart J-Standards of Performance for Petroleum Refineries. These regulations shall apply to the FCC Regenerator and any other equipment, as appropriate; for CO, the requirements of Subpart J shall apply by December 20, 2002; and for SO_2, the requirements of Subpart J shall apply by December 20, 2004 (MRC Consent Decree).

E.8. MRC shall install and use a SO_2, CO, NO_X, and O_2 CEMS to monitor compliance of the FCCU. MRC shall install, certify, calibrate, maintain and operate the above-mentioned CEMS in accordance with the requirements of 40 CFR §§ 60.11, 60.13 and Part 60 Appendix A, and the applicable performance specification test of 40 CFR Part 60, Appendices B and F (MRC Consent Decree).

E.9. CO emissions from the FCCU shall not exceed 500 ppmvd, corrected to 0% oxygen (O_2) on a 1-hour average basis; and 100 ppmvd, corrected to 0% O_2 on a 365-day rolling average basis (ARM 17.8.749 and Consent Decree).

Compliance Demonstration

E.10. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be minimum of 6 minutes, unless any one reading is 20%/40% or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

E.11. Compliance with the PM emission limit of 15.0 lb/hr shall be demonstrated by conducting a 3-hour performance test representative of normal operating conditions for PM emissions by December 31 of each calendar year beginning with December 31, 2001. If any performance test undertaken pursuant this section is not representative of normal operating conditions, MRC shall conduct a subsequent performance test representative of normal operating conditions by no later than 90 days after the test that was not representative (MRC Consent Decree).

E.12. MRC shall monitor compliance with Section III.E.4 by verifying that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired in the FCC Preheater (ARM 17.8.1213).

E.13. MRC shall perform a weekly GC analysis of the sweet fuel gas drum to ensure the sulfur content does not exceed 160-ppm as required by Section III.E.5 (ARM 17.8.1213).

E.14. MRC shall monitor compliance with the equipment leak requirements by complying with 40 CFR 63.654 (ARM 17.8.342 and 40 CFR 63, Subpart CC).

E.15. MRC shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR Part 60, NSPS, Subpart J, Standards of Performance for Petroleum Refineries. These regulations shall apply to the FCC Regenerator and any other equipment, as applicable (ARM 17.8.340 and 40 CFR 60, Subpart J).

E.16. In order to accurately determine the SO_2, CO, and NO_X emission rates in pounds per hour for the FCCU, MRC shall perform annual source testing using EPA-approved methods or an equivalent method approved by the Department and EPA (ARM 17.8.106). The annual Relative Accuracy Test Audit (RATA) required may be substituted for the annual source tests, provided that the flow rate RATA and the concentration RATA are performed simultaneously and additional calculations are made to determine and report the data in pounds per hour of SO_2, CO, and, NO_X (ARM 17.8.749 and ARM 17.8.1211).

E.17. The FCCU shall be tested for CO and the results submitted to the Department in order to monitor compliance with the emission limits contained in Section E.9. The testing shall occur in 1998, 2000, 2002, and continue on an every 2-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.106).

Recordkeeping

E.18. Method 9 and 5 test reports must be maintained on site and must be submitted to the Department upon request, in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

E.19. No recordkeeping is necessary to demonstrate compliance with Section III.E.12 (ARM 17.8.1212).

E.20. MRC shall maintain the GC analysis of the sweet fuel gas on site and submit it to the Department quarterly (ARM 17.8.1212).

E.21. MRC shall meet the recordkeeping requirements for equipment in accordance with 40 CFR 63.654 (ARM 17.8.342 and 40 CFR 63, Subpart CC).

E.22. MRC shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60, Subpart J as applicable (ARM 17.8.340 and 40 CFR 60, Subpart J).

E.23. Recordkeeping compiled for purposes of demonstrating compliance with Section III.E.16 and 17 shall be retained by MRC for a minimum of 5 years (ARM 17.8.1212).

E.24. Method 10 test reports must be maintained on site and must be submitted to the Department upon request, in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

Reporting

E.25. All source test reports shall be submitted to the Department in accordance with test methods being used and Section III.A.1 (ARM 17.8.106).

E.26. The annual compliance certification report required by Section V.B, must contain a certification statement for the above applicable requirements. The semiannual and quarterly reporting, as required by Sections III.A.13 and 15, shall provide (ARM 17.8.1212):

a. Semiannually, a summary of results of any testing that was performed on the FCCU;

b. Semiannually, a verification that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired in the FCC Preheater as required by Section III.E.12;

c. Quarterly, a summary of the GC analysis of the sweet fuel gas that were conducted as required by Section III.E.13;

d. Certification of compliance with 40 CFR 63, Subpart CC;

e. Verification that compliance with 40 CFR 60, Subpart J was maintained as applicable; and

f. Verification that CEMS quarterly reports were submitted as required by Section III.E.14.

F. EU05 – CATALYTIC REFORMER UNIT

EU05a – Reformer Heater (sweet fuel gas) **EU05b – Naphtha Heater (sweet fuel gas)**
EU05c – Standard Gas Valves **EU05d – Standard Light Valves**
EU05e – Kerosene Heater (sweet fuel gas)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
F.1, F.2, F.7, F.12, F.17	Opacity	20%/40%	Method 9	As required by the Department	Semiannual
F.3, F.8, F.13, F.17	Sulfur in fuel (liquid or solid)	1 lb/MMBtu	Verification of non-use	Ongoing	
F.4, F.9, F.14, F.17	Reformer Heater, Naphtha Heater & Kerosene Heater (sulfur concentration) Naptha HDS Unit & Kerosene HDS Unit	160 ppm by volume – dry basis	GC	Weekly	Quarterly
F.5, F.10, F.15, F.17	Equipment Leaks	40 CFR 63.648	40 CFR 63.654	40 CFR 63.654	40 CFR 63.654
F.6, F.11, F.16, F.17	Heaters and Boilers	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60, Subpart J	Semiannual

Conditions

F.1. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the Reformer heater, Naptha heater, and Kerosene heater, that exhibits an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

F.2. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the valves, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)).

F.3. MRC shall not burn liquid or solid fuels containing sulfur in excess of 1 lb/MMBtu fired (ARM 17.8.322(4)).

F.4. MRC shall not combust fuel gas with a sulfur concentration in excess of 160 ppm by volume on a dry basis in the Reformer Heater, Kerosene Heater, and the Naphtha Heater (ARM 17.8.749).

F.5. MRC shall comply with the requirements of 40 CFR 63.648 for equipment (40 CFR 63, Subpart CC).

F.6. MRC shall comply with all applicable requirements of 40 CFR, Part 60, Standards of Performance for New Stationary Sources, Subpart J-Standards of Performance for Petroleum Refineries. These regulations shall apply to heaters and boilers and any other equipment, as appropriate. By no later than December 31, 2006, MRC shall install, certify, calibrate, maintain, and operate a fuel gas CEMS in accordance with the requirements of 40 CFR §§ 60.11, 60.13, and Part 60 Appendix A, and the applicable performance specification test of 40 CFR Part 60 Appendices B and F (MRC Consent Decree).

Compliance Demonstration

F.7. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be minimum of 6 minutes, unless any one reading is 20%/40% or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

F.8. MRC shall monitor compliance with Section III.F.3 by verifying that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired in the Reformer Heater, the Kerosene Heater, and the Naptha Heater (ARM 17.8.1213).

F.9. MRC shall perform a weekly GC analysis of the sweet fuel gas drum to ensure the sulfur content does not exceed 160 ppm as required by Section II.F.4 (ARM 17.8.1213).

F.10. MRC shall monitor compliance with the equipment leak requirements by complying with 40 CFR 63.654 (ARM 17.8.342 and 40 CFR 60, Subpart CC).

F.11. MRC shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR Part 60, NSPS, Subpart J, Standards of Performance for Petroleum Refineries. These regulations shall apply to heaters and boilers and any other equipment, as applicable (ARM 17.8.340 and 40 CFR 60, Subpart J).

Recordkeeping

F.12. Method 9 test reports must be maintained on site and must be submitted to the Department upon request, in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

F.13. No recordkeeping is necessary to demonstrate compliance with Section III.F.8 (ARM 17.8.1212).

F.14. MRC shall maintain the GC analysis of the sweet fuel gas on site and submit a summary of the results to the Department quarterly (ARM 17.8.1212).

F.15. MRC shall meet the recordkeeping requirements for equipment in accordance with 40 CFR 63.654 (ARM 17.8.342 and 40 CFR 63, Subpart CC).

F.16. MRC shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60, Subpart J, as applicable (ARM 17.8.340 and 40 CFR 60, Subpart J).

Reporting

F.17. The annual compliance certification report required by Section V.B, must contain a certification statement for the above applicable requirements. The semiannual and quarterly reporting, as required by Sections III.A.13 and 15, shall provide (ARM 17.8.1212):

a. Semiannually, a summary of results of any testing that was performed on the Reformer Heater, Naptha Heater, Kerosene Heater, and the valves of the Cat Reformer heater;

b. Semiannually, verify that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired in the Reformer Heater, Naptha Heater, and Kerosene Heater, as required by Section III.F.8;

c. Quarterly, a summary of the GC analysis of the sweet fuel gas, as required by Section III.F.14;

d. Certification of compliance with 40 CFR 63, Subpart CC; and

e. Verification that compliance with 40 CFR 60, Subpart J was maintained, as applicable.

G. EU06 – STORAGE UNIT

EU06a – Storage Facilities **EU06b – Pumps**
EU06c – Storage LPG **EU06d – Standard Light Valves**
EU06e – Storage Tank Farm **EU06f – Tanks Light**

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
G.1, G.8, G.13, G.18	Opacity	20%	Method 9	As required by the Department	Semiannual
G.2, G.9, G.14, G.18	Tanks #52, #53, #57	Double seal internal floating roofs	Verification & inspection	Semiannual & annual	
G.3, G.10, G.14, G.18	Tanks #122, #123, #124, #125, & #126	Dual-seal external floating roofs	Measure seal gaps on primary and secondary seals	Every 5 years annually	
G.4, G.10, G.14, G.18	Tanks #127 & #128	Dual-seal external floating roofs	Measure seal gaps on primary and secondary seals	Every 5 years annually	
G.5, G.11, G.15, G.18	Tanks #8, #9, #55, #56, #69, #130, #132, #133, WT-1901, and RT-1901	Used for asphalt, modified asphalt, or tall oil service	Verification	Semiannual	
G.6, G.12, G.16, G.18	Tanks ##52, #53, #57, #122, #123, #124, #125, &#126	40 CFR 60, Subpart Kb	40 CFR 60, Subpart Kb -§60.112b, §60.113b, §60.115b and §60.116b. -fixed roof in combo w/ an internal floating roof - external floating roof - closed vent system & control device	In accordance with 40 CFR 60, Subpart Kb	In accordance with 40 CFR 60, Subpart Kb & Semiannual
G.7, G.12, G.17, G.18	Equipment Leaks	40 CFR 63.648	40 CFR 63.654	40 CFR 63.654	40 CFR 63.654
G.7, G.12, G.17, G.18	Group 1 Vessels	40 CFR 63.119	40 CFR 63.120, 63.123& 63.148	40 CFR 63.120, 63.123& 63.148	40 CFR 63.120, 63.123& 63.148

Conditions

G.1. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions

of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

G.2. Storage tanks #52, #53, and #57 shall be equipped with double seal internal floating roofs (ARM 17.8.752).

G.3. Storage tanks #122, #123, #124, #125, and #126 shall be equipped with dual-seal external floating roofs (ARM 17.8.752).

G.4. Storage tanks #127 and #128 shall be equipped with dual-seal external floating roofs.

G.5. Storage tanks #8, #9, #55, #56, #69, #130, #132, #133, WT-1901, and RT-1901 shall be used for asphalt, modified asphalt, or tall oil service or similar service (ARM 17.8.749).

G.6. MRC shall comply with the requirements of 40 CFR 63.648 for equipment (40 CFR 63, Subpart CC).

G.7. MRC shall comply with the requirements of 40 CFR 63.119 for Group, 1 Storage Vessels that includes, but is not limited to, complying with 40 CFR 63.646, except as provided by 40 CFR 63.640(n) for the tanks listed in Section III.G.2 and 3 (ARM 17.8.342 and 40 CFR Part 60, Subpart Kb, and 40 CFR 63, Subpart CC).

Compliance Demonstration

G.8. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be minimum of 6 minutes unless any one reading is 20% or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

G.9. Annually, MRC shall inspect and log the results of the inspection on the double seal internal floating roofs on tanks #52, #53, and #57. Furthermore, MRC shall maintain the roofs in good working order (ARM 17.8.1213).

G.10. MRC shall maintain the dual seal external floating roofs on tanks #122, #123, #124, #125, #126, #127 and # 128. The primary seals shall be visually inspected for gaps every 5 years and the secondary seals shall be visually inspected for holes annually. MRC shall maintain a log of the inspections (ARM 17.8.1213).

G.11. MRC shall verify that tanks #8, #9, #55, #56, #69, #130, #132, #133, WT-1901, and RT-1901 shall be used for asphalt, modified asphalt, or tall oil service only (ARM 17.8.1213).

G.12. MRC shall monitor compliance with the equipment leak and storage vessels requirements by complying with 40 CFR 63.654, 63.640(n)(1), 63.646, that includes the requirements of 40 CFR 60, Subpart Kb (ARM 17.8.1213).

Recordkeeping

G.13. Method 9 test reports must be maintained on site and must be submitted to the Department upon request in accordance with (ARM 17.8.106 and ARM 17.8.1212).

G.14. MRC shall maintain the log on site as specified in Section III.G.9 and 10. Each log entry must include the date, time, results of the inspection, and inspector's initials (ARM 17.8.1212).

G.15. No recordkeeping is necessary for Section III.G.11 (ARM 17.8.1212).

G.16. MRC shall maintain records in accordance with §60.115b (ARM 17.8.342 and 40 CFR 63, Subpart CC).

G.17. MRC shall meet the recordkeeping requirements for equipment leaks and storage vessels in accordance with 40 CFR 63.654 and 63.123 (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Reporting

G.18. The annual compliance certification report required by Section V.B, must contain a certification statement for the above applicable requirements. The semiannual reporting, as required by Section III.A.13, shall provide (ARM 17.8.1212):

a. A summary of results of any testing that was performed on any of the Storage Units;

b. A summary of logs maintained, as required by Section III.G.14;

c. A verification that the tanks are used only for asphalt, modified asphalt, tall oil, or similar service, as required by Section III G.11;

d. A summary of all reports completed in accordance with §60.115b; and

e. A certification of compliance with 40 CFR 63, Subpart CC.

H. EU07 – UTILITY UNIT

EU07a – Wastewater Treatment Plant **EU07b – Boilers #1&#2 (sour fuel gas)**
EU07c – Standard Gas Valves

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
H.1, H.2, H.12, H.18, H.25	Opacity	20% & 40%	Method 9	As required by the Department	Semiannual
H.3, H.13. H.19, H.25	Sulfur in fuel (liquid or solid)	1 lb/MMBtu	Verification of non-use	Ongoing	
H.4, H.14, H.19, H.25	Boilers #1 & #2	Incinerate wastewater overhead from HTU SWS unit	Verification	Ongoing	
H.5, H.15, H.20, H.25, H.26	SO_2 Boilers #1 & #2	355 lb/hr avg. over 3hr period	H_2S analyzer	Ongoing Quarterly	Quarterly
H.6, H.15, H.20, H.25, H.26	SO_2 Boilers #1 & #2	648 TPY (148 lb/hr) avg. over 1 yr	H_2S monitor	Ongoing Quarterly	
H.7, H.15, H.20, H.25, H.26	SO_2 Boilers #1 & #2	125 lb/hr avg. over 24hr (Apr 1 thru Oct 31)	H_2S monitor	Ongoing Quarterly	
H.8, H.15, H.20, H.25, H.26	SO_2 Boilers #1 & #2	174 lb/hr avg. over 24hr (Nov 1 thru Mar 31)	H_2S monitor	Ongoing Quarterly	
H.9, H.16, H.22, H.25	NO_x Boilers #1 & #2	76.50 lb/hr (335 TPY)	Method 7	Every 2 yrs	Semiannual
H.10, H.16, H.23, H.25	CO Boilers #1 & #2	1.0 lb/hr (4.4 TPY)	Method 10	Every 2 yrs	
H.11, H.17, H.24, H.25	Heaters and Boilers	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60, Subpart J	

Conditions

H.1. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the Boilers #1 and #2 stack, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

H.2 MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the wastewater treatment plant, including the valves, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

H.3. MRC shall not burn liquid or solid fuels containing sulfur in excess of 1 lb/MMBtu fired (ARM 17.8.322(4)).

H.4. Boiler's #1 and #2 shall incinerate the wastewater overhead stream from the HTU SWS unit (ARM 17.8.749).

H.5. The #1 and #2 boiler stack shall be limited to 355 lb/hr of SO_2, averaged over a 3-hour period (ARM 17.8.749).

H.6. The #1 and #2 boiler stack shall be limited to 648 TPY of SO_2, averaged over a 1 year period (148 lb/hr of SO_2 averaged over a 1 year period) (ARM 17.8.749).

H.7. The #1 and #2 boiler stack shall be limited, from April 1 through October 31, to 125 lb/hr of SO_2, averaged over a 24-hour period (ARM 17.8.749).

H.8. The #1 and #2 boiler stack shall be limited, from November 1 through March 31, to 174 lb/hr of SO_2, averaged over a 24-hour period (ARM 17.8.749).

H.9. The #1 and #2 boiler stack shall be limited to 76.50 lb/hr of NO_x or 335 TPY of NO_x (ARM 17.8.752).

H.10. The #1 and #2 boiler stack shall be limited to 1.00 lb/hr of CO or 4.4 TPY of CO (ARM 17.8.752).

H.11. MRC shall comply with all applicable requirements of 40 CFR, Part 60, Standards of Performance for New Stationary Sources, Subpart J-Standards of Performance for Petroleum Refineries. These regulations shall apply to heaters and boilers and any other equipment, as appropriate. By no later than December 31, 2006, MRC shall install, certify, calibrate, maintain, and operate a fuel gas CEMS in accordance with the requirements of 40 CFR §§ 60.11, 60.13, and Part 60 Appendix A, and the applicable performance specification test of 40 CFR Part 60 Appendices B and F (MRC Consent Decree).

Compliance Demonstration

H.12. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be minimum of 6 minutes, unless any one reading is 20% (wastewater treatment plant, including valves) /40% (Boilers #1 & #2 stack) or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

H.13. MRC shall monitor compliance with Section III.H.3 by verifying that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired in Boiler's #1 and #2 (ARM 17.8.1213).

H.14. MRC shall verify that Boiler's #1 and #2 shall incinerate the wastewater overhead stream from the HTU SWS unit (ARM 17.8.1213).

H.15. MRC shall operate and maintain an H_2S monitoring system for boiler #1 and #2 to monitor and record the H_2S concentration and fuel gas flow to boilers #1 and #2. The H_2S monitoring system shall include an ongoing H_2S concentration monitor, a continuous fuel gas flow rate meter for each boiler, and a data acquisition and management system.

The ongoing H_2S concentration monitor shall comply with the provisions of Appendix H of this permit, Quality Assurance Requirements for MRC's Ongoing H_2S Concentration Monitoring System (CCMS) that shall be used for compliance monitoring.

MRC shall achieve 95% data availability from the H_2S monitoring system on a calendar year basis. MRC shall maintain compliance with applicable limitations, as monitored by the H_2S monitoring system, 95% of the time boilers #1 and #2 are operating. The monitoring and analyzed data will be used to monitor compliance with the applicable SO_2 and NO_x emission limitations for boilers #1 & #2(ARM 17.8.1213).

H.16. MRC shall perform Methods 7 and 10 for NO_x and CO, concurrently, on the boilers #1 and #2 stack and submit the results to the Department to monitor compliance with the emission limits contained in Sections III.H.9 and 10. The testing shall occur on an every 2-year basis, and shall be done in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105 and ARM 17.8.106).

H.17. MRC shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR Part 60, NSPS, Subpart J, Standards of Performance for Petroleum Refineries. These regulations shall apply to heaters and boilers and any other equipment, as applicable (ARM 17.8.340 and 40 CFR 60, Subpart J).

Recordkeeping

H.18. Method 9 test reports must be maintained on site and must be submitted to the Department upon request in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

H.19. No recordkeeping is necessary for the verification as required by Section III.H.13 and H.14 (ARM 17.8.1212).

H.20. Compliance with boiler #1 and #2 SO_2 emission limitations contained in Sections III.H.5, 6, 7, and 8, shall be determined using the sum of the following (ARM 17.8.1212):

a. The calculated emissions due to the combustion of the HTU SWS overhead stream in the boilers; and

b. The data from the H_2S monitoring system required by Section III.H.15.

H.21. The test reports, as required by Section III.H.16, must be maintained on site and must be submitted to the Department in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

H.22. In addition to the testing required in Section III.H.16, compliance determinations for the NO_x emission limits for boilers #1 and #2 shall be determined using the sum of the following (ARM 17.8.1212):

a. Actual fuel burning rates and the emission factors developed from the most recent compliance source test conducted while firing refinery fuel gas; and

b. The calculated emissions due to the combustion of the HTU SWS overhead stream in the boilers.

H.23. In addition to the testing required in Section III.H.16, compliance determinations for the CO emission limits for boilers #1 and #2 shall be determined using the actual fuel burning rates and the emission factors developed from the most recent compliance source test (ARM 17.8.1212).

H.24. MRC shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60, Subpart J as applicable (ARM 17.8.340 and 40 CFR 60, Subpart J).

Reporting

H.25. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements. The semiannual reporting, as required by Section III.A.14, shall provide (ARM 17.8.1212):

a. A summary of results of any testing that was performed on the Utility Unit;

b. Verification that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired in Boiler's #1 and #2, as required by Section III.H.13;

c. Verification that the HTU SWS overhead stream was incinerated in the #1 and #2 boilers; and

d. Verification that compliance with 40 CFR 60, Subpart J was maintained as applicable.

H.26. MRC shall provide quarterly reports using the data collected, as required in Section H.25 that will monitor compliance with the boilers #1 and #2 emission limits. The quarterly reports shall include the following (ARM 17.8.1212):

a. Operating times for #1 and #2 boilers and the times the overhead stream from the HTU SWS was combusted in the boilers during the reporting period;

b. The total hourly flow rates of the fuel gas to the #1 and #2 boilers;

c. The hourly average H_2S concentrations of the fuel gas to the #1 and #2 boilers;

d. All chemical analysis of the HTU SWS unit wastewater stream, as required by Appendix F of this permit;

e. The total hourly flow rates of the wastewater stream into the HTU SWS unit, as required by Appendix F of this permit;

f. Emission estimates for SO_2 from the incineration of HTU SWS off gases as described in Appendix F of this permit;

g. Emission estimates for NO_x from the incineration of HTU SWS off gases as described in Appendix F of this permit. The NO_x emission rate shall be reported as an hourly average;

h. Emission estimates for NO_x from actual fuel burning rates and the emission factors developed from the most recent compliance source test of the #1 and #2 boilers. The NO_x emission rates shall be reported as an hourly average;

i. Report the total NO_x emissions from the incineration of the wastewater streams from the HTU SWS and from fuel gas firing for each month of the quarter; and

j. The amount of monitoring downtime that occurred during the reporting period.

I. EU08 – ALKYLATION UNIT

EU08a – Deisobutanizer Reboiler (sweet fuel gas) **EU08b – Standard Light Valves**
EU08c – Pumps Light **EU08d – Oily Water Separator**

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
I.1, I.2, I.7, I.12, I.17	Opacity	20%/40%	Method 9	As required by the Department	Semiannual
I.3, I.8, I.13, I.17	Sulfur in fuel (liquid or solid)	1 lb/MMBtu	Verification of non-use	Ongoing	
I.4, I.9, I.14, I.17	Alky Heaters	160 ppm by volume – dry basis	GC	Weekly	Quarterly
I.5, I.10, I.15, I.17	Alky Unit	High quality valves, and pumps and other VOC emission points	40 CFR 60.482-2 40 CFR 60.482-7	Pumps (weekly) valves (monthly) other (quarterly)	Semiannual
I.6, I.11, I.16, I.17	Heaters and Boilers	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60, Subpart J	

Conditions

I.1. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the Deisobutanizer Reboiler, that exhibits an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

I.2. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the valves, pumps, and oily water separator, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

I.3. MRC shall not burn liquid or solid fuels containing sulfur in excess of 1 lb/MMBtu fired (ARM 17.8.322(4)).

I.4. MRC shall not combust fuel gas with a sulfur concentration in excess of 160 ppm by volume on a dry basis in the heaters associated with the Alkylation Unit (ARM 17.8.749).

I.5. The Alkylation unit shall be operated and maintained as follows (ARM 17.8.749):

a. All valves used shall be high quality valves containing high quality packing;

b. All open-ended valves shall be of the same quality as the valves described above. They shall have plugs or caps installed on the open end;

c. All pumps used in the alkylation plant shall be fitted with the highest quality state-of-the-art mechanical seals;

d. All pumps shall be monitored and maintained as described in 40 CFR 60.482-2 and all control valves shall be monitored and maintained as described in 40 CFR 60.482-7. All other potential sources of Volatile Organic Compound (VOC) leaks shall be inspected

quarterly for evidence of leakage by visual or other detection methods. Repairs shall be made promptly as described in 40 CFR 482-7d. Records of monitoring and maintenance shall be maintained on site for a minimum of 2 years;

e. All process drains shall consist of water seal traps with covers; and

f. All equipment shall be operated and maintained as described in 40 CFR 60.692-2, 60.692-6, and 60.693-1. Inspection reports shall be made available for inspection upon request.

I.6. MRC shall comply with all applicable requirements of 40 CFR, Part 60, Standards of Performance for New Stationary Sources, Subpart J-Standards of Performance for Petroleum Refineries. These regulations shall apply to heaters and boilers and any other equipment, as appropriate. By no later than December 31, 2006, MRC shall install, certify, calibrate, maintain, and operate a fuel gas CEMS in accordance with the requirements of 40 CFR §§ 60.11, 60.13, and Part 60 Appendix A, and the applicable performance specification test of 40 CFR Part 60 Appendices B and F (MRC Consent Decree).

Compliance Demonstration

I.7. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be minimum of 6 minutes, unless any one reading is 20%/40% or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

I.8. MRC shall monitor compliance with Section III.I.3 by verifying that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired in the heaters associated with the Alkylation Unit (ARM 17.8.1213).

I.9. MRC shall perform a weekly GC analysis of the sweet fuel gas drum to ensure the sulfur content does not exceed 160 ppm as required by Section II.I.4 (ARM 17.8.1213).

I.10. Compliance with the requirements for the pumps and control valves shall meet the requirements of 40 CFR 60.482-2 and 40 CFR 60.482-7, respectively, that includes, but is not limited to the following (ARM 17.8.1213):

a. Each pump in light liquid service shall be monitored monthly to determine leaks by methods specified in §60.485;

b. Each pump in light liquid service shall be visually inspected each calendar week for indications of liquids dripping from the pump seal; and

c. Each control valve shall be monitored monthly to detect leaks by the methods specified in §60.485.

I.11. MRC shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR Part 60, NSPS, Subpart J, Standards of Performance for Petroleum Refineries. These regulations shall apply to heaters and boilers and any other equipment, as applicable (ARM 17.8.340 and 40 CFR 60, Subpart J).

Recordkeeping

I.12. Method 9 test reports must be maintained on site and must be submitted to the Department upon request in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

I.13. No recordkeeping is necessary to demonstrate compliance with Section III.I.8 (ARM 17.8.1212).

I.14. MRC shall maintain the GC analysis of the sweet fuel gas on site and submit a summary of the results to the Department quarterly (ARM 17.8.1212).

I.15. MRC shall maintain a log on site of the repairs necessary to maintain compliance with Section III.I.10. Each log entry must include the date, time, summary of the necessary repairs, and observer's initials (ARM 17.8.1212).

I.16. MRC shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60, Subpart J as applicable (ARM 17.8.340 and 40 CFR 60, Subpart J).

Reporting

I.17. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements. The semiannual and quarterly reporting, as required by Sections III.A.13 and 15, shall provide (ARM 17.8.1212):

a. Semiannually, a summary of results of any testing that was performed on the Alkylation Unit;

b. Semiannually, verify that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired in the heaters associated with the Alkylation Unit, as required by Section III.I.8;

c. Quarterly, a summary of the GC analyses of the sweet fuel gas; and

d. Semiannually, a summary of log of actions taken to repair the valves or pumps.

e. Verification that compliance with 40 CFR 60, Subpart J was maintained, as applicable.

J. EU09 – HYDROGEN PLANT

EU09a – Hydrogen Plant Reformer Furnace Stack (natural gas)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
J.1, J.8, J.14, J.20	Opacity	20%	Method 9	As required by the Department	Semiannual
J.2, J.9. J.15, J.20	Sulfur in fuel (liquid or solid)	1 lb/MMBtu	Verification of non-use	Ongoing	
J.3, J.10, J.14, J.18, J.20	NO_x	0.07 lb/MMBtu 1.90 lb/hr 8.3 TPY	Actual fuel burning rates & latest testing emission factors	Monthly	
			Method 7	As required by the Department	
J.4, J.10, J.14, J.18, J.20	CO	0.93 lb/hr 4.1 TPY	Actual fuel burning rates & latest testing emission factors	Monthly	
			Method 10	As required by the Department	
J.5, J.11, J.17, J.20	Hydrogen Plant	Natural gas only	Verification	Semiannual	
J.6, J.12, J.18, J.20	Hydrogen Plant	40 CFR 60, Subpart QQQ §60.692-1 to §60.692-5 and §60.693-1 & §60.693-2, except during periods of startup, shutdown, & malfunction. process drains have water seal traps with covers.	In accordance w/ 40 CFR 60, Subpart QQQ	In accordance w/ 40 CFR 60 Subpart QQQ	Semiannual & In accordance w/ §60.698
J.7, J.13, J.19, J.20	Hydrogen Plant	40 CFR, Subpart GGG - high quality valves & open-ended valves (plugs or caps) w/ high quality packing monitoring & maintenance program as 40 CFR Part 60, Subpart VV	§60.482-1 to §60.482-10 may comply w/ §60.483-1 or §60.483-2 §60.485 except as provided in §60.593 -compliance w/ §60.486 & §60.487, etc.	In accordance w/ 40 CFR 60, Subpart GGG	Semiannual

Conditions

J.1. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

J.2. MRC shall not burn solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu fired ARM 17.8.322(4)).

J.3. NO_x emissions shall not exceed the limit of 0.07 lb/MMBtu, 1.90 lb/hr, or 8.3 ton/yr (ARM 17.8.752).

J.4. CO emissions shall not exceed the limit of 0.93 lb/hr, or 4.1 ton/yr (ARM 17.8.752).

J.5. The hydrogen plant shall only be fired with purchased commercially available natural gas, that includes recycled gas from the hydrogen plant, and shall not be fired with refinery gas or refinery LPG. The purge (vent) gas used as fuel in the hydrogen plant reformer heater shall be sulfur free (ARM 17.8.752).

J.6. MRC shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements, as required by 40 CFR 60, Subpart QQQ Standards of Performance for Petroleum Refining Wastewater Systems for the hydrogen plant that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR Part 60, Subpart QQQ):

a. MRC shall meet the requirements of §60.692-1 to §60.692-5 and §60.693-1 and §60.693-2, except during periods of startup, shutdown, and malfunction; and

b. All process drains shall consist of water seal traps with covers.

J.7. MRC shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements, as required by 40 CFR 60, Subpart GGG Standards of Performance for Equipment Leaks in Petroleum Refineries for the hydrogen plant, that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR Part 60, Subpart GGG):

a. All valves used shall be high quality valves containing high quality packing;

b. All open-ended valves shall be of the same quality as the valves described above. They shall have plugs or caps installed on the open end; and

c. A monitoring and maintenance program, as described under New Source Performance Standards 40 CFR Part 60, Subpart VV Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Industry, shall be instituted.

Compliance Demonstration

J.8. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be minimum of 6 minutes, unless any one reading is 20% or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

J.9. MRC shall monitor compliance with Section III.J.2 by verifying that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired in the hydrogen plant (ARM 17.8.1213).

J.10. Compliance determinations for NO_x and CO emission limits for the hydrogen plant reformer heater shall be based upon actual fuel burning rates and the emission factors developed from the most recent compliance source test and shall be calculated monthly. As required by the Department, MRC shall conduct Method 7 and 10 tests to monitor compliance with the NO_x and CO emission limitations in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105 and ARM 17.8.1213).

J.11. MRC shall verify that the hydrogen plant is only fired with purchased commercially available natural gas, that includes recycled gas from the hydrogen plant and shall not be fired with refinery gas or refinery LPG (ARM 17.8.1213).

J.12. MRC shall monitor compliance in accordance with 40 CFR 60, Subpart QQQ (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

J.13. As applicable, MRC shall monitor compliance as instructed by 40 CFR 60, Subpart GGG, that includes, but is not limited to the following (ARM 17.8. 340 and 40 CFR 60, Subpart GGG):

a. Compliance with §60.482-1 to §60.482-10;

b. MRC may elect to comply with §60.483-1 or §60.483-2;

c. Compliance with §60.485 except as provided in §60.593; and

d. Compliance with §60.486 and §60.487.

Recordkeeping

J.14. All test reports performed on the Hydrogen Plant must be maintained on site and must be submitted to the Department upon request in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106 and ARM 17.8.1212).

J.15. No recordkeeping is necessary to demonstrate compliance with Section III.J.9 (ARM 17.8.1212).

J.16. MRC shall maintain a record, on site, of the actual fuel burning rates of the hydrogen plant reformer heater and submit it to the Department upon request. The record must include the date, time, actual fuel burning rates, calculated emissions, and reviewer's initials (ARM 17.8.1212).

J.17. No recordkeeping is necessary to demonstrate compliance with Section III.J.11 (ARM 17.8.1212).

J.18. MRC shall keep records in accordance with 40 CFR 60, Subpart QQQ §60.697 (ARM 17.8. 340 and 40 CFR 60, Subpart QQQ).

J.19. MRC shall keep records in accordance with 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).

Reporting

J.20. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements. The semiannual reporting, as required by Section III.A.13, shall provide (ARM 17.8.1212):

a. A summary of results of any testing that was performed on the Hydrogen Plant;

b. A verification that no solid or liquid fuels containing sulfur in excess of 1 lb/MMBtu have been fired in the hydrogen plant, as required by Section III.J.9;

c. A summary of the log and calculated emissions, as required by section III.J.16;

d. A summary report of compliance as required by §60.697; and

e. A summary of records kept in accordance with 40 CFR 60, Subpart GGG.

K. EU10 – GASOLINE LOADING RACK

EU10a – Gasoline Loading Rack EU10b – Vapor Combustion Unit (VCU)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
K.1, K.6, K.18, K.24	VOC	10 mg/L	40 CFR 63.425	Every 5 years	Semiannual
K.2, K.7, K.19, K.24	CO	10 mg/L	Method 10	As required by the Department	
K.3, K.7, K.19, K.24	NO_x	4 mg/L	Method 7	As required by the Department	
K.4, K.8, K.20, K.24	Opacity	10%	Method 9	As required by the Department	
K.4, K.8, K.20, K.24	Particulate emissions	0.10 gr/dscf corrected to 12% CO_2	Method 5	As required by the Department	
K.5a, K.9, K.21, K.24	Loading rack	Equipped w/ vapor collection system	Verification	Semiannually	
K.5b, K.10, K.21, K.24	Loading rack vapors	Vapor Combustion Unit	Verification	Semiannually	
K.5c, K.11, K.18, K.24	Gasoline cargo tank	≤4500 Pa during loading	Performance testing	Every 5 years	
K.5d, K.12, K.21, K.24	Pressure-vacuum vent	No opening @ P<4500 Pa	Verification	During loading	
K.5e, K.12, K.21, K.24	Vapor Collection System	No passing of VOC from one position to another	Verification	During loading	
K.5f, K.13, K.22, K.24	Loading of liquid	Vapor-tight gasoline cargo tanks	Log	Loading procedures	
K.5g, K.14, K.21, K.24	Loading of tanks	Limited to compatible tanks	Verification	During loading	
K.5h, K.14, K.21, K.24	Gasoline cargo tanks	Vapor recovery system connected during each loading	Verification	During loading	
K.5i, K.15, K.21, K.24	VCU	CPMS	Verification	Ongoing	
K.5j, K.16, K.23, K.24	Pumps, shutoff valves, relief valves, & other piping & valves	Monitor and maintain	Meet requirements of 40 CFR 60.482-1-10	Ongoing	
K.5k, K.17, K.21, K.24	VCU stack	35 ft above grade	Verification	None	

Conditions

K.1. The total VOC emissions to the atmosphere from the VCU, due to loading liquid product into cargo tanks, shall not exceed 10.0 milligrams per liter (mg/L) of gasoline loaded (ARM 17.8.342 and ARM 17.8.752 and 40 CFR 63, Subpart R).

K.2. The total CO emissions to the atmosphere from the VCU, due to loading liquid product into cargo tanks, shall not exceed 10.0 mg/L of gasoline loaded (ARM 17.8.752).

K.3. The total NO_x emissions to the atmosphere from the VCU, due to loading liquid product into cargo tanks, shall not exceed 4.0 mg/L of gasoline loaded (ARM 17.8.752).

K.4. MRC shall not cause or authorize to be discharged into the atmosphere from the VCU (ARM 17.8.752):

a. Any visible emissions that exhibit an opacity of 10% or greater; and

b. Any particulate emissions in excess of 0.10 grains per dry standard cubic foot (gr/dscf) corrected to 12% carbon dioxide (CO_2).

K.5. The bulk loading gasoline and distillates truck loading rack shall be operated and maintained as follows:

a. MRC's tank truck loading rack shall be equipped with a vapor collection system designed to collect the organic compound vapors displaced from cargo tanks during gasoline product loading (ARM 17.8.342 and 40 CFR 63, Subpart R).

b. MRC's collected vapors shall be routed to the VCU at all times. In the event the VCU is inoperable, MRC may continue to load distillates, provided the Department is notified in accordance with the requirements of ARM 17.8.110 (ARM 17.8.752).

c. The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the gasoline cargo tank from exceeding 4,500 Pascal's (Pa) (450 millimeters [mm] of water) during product loading. This level shall not be exceeded when measured by the procedures specified in the test methods and procedures in 40 CFR 60.503(d) (ARM 17.8.342).

d. No pressure-vacuum vent in the permitted terminal's vapor collection system shall begin to open at a system pressure less than 4,500 Pa (450 mm of water) (ARM 17.8.342 and 40 CFR 63, Subpart R).

e. The vapor collection system shall be designed to prevent any VOC vapors, collected at one loading position, from passing to another loading position (ARM 17.8.342 and 40 CFR 63, Subpart R).

f. Loading of liquid products into gasoline cargo tanks shall be limited to vapor-tight gasoline cargo tanks using the following procedures (ARM 17.8.342 and 40 CFR 63, Subpart R):

i. MRC shall obtain annual vapor tightness documentation, described in the test methods and procedures in 40 CFR 63.425(e), for each gasoline cargo tank that is to be loaded at the truck loading rack;

ii. MRC shall require the cargo tank identification number to be recorded as each gasoline cargo tank is loaded at the terminal;

iii. MRC shall cross-check each tank identification number, obtained during product loading, with the file of tank vapor tightness documentation within two weeks after the corresponding cargo tank is loaded;

iv. MRC shall notify the owner or operator of each non-vapor-tight cargo tank, loaded at the truck loading rack, within three weeks after the loading has occurred; and

v. MRC shall take the necessary steps to ensure that any non-vapor-tight cargo tank will not be reloaded at the truck loading rack until vapor tightness documentation for that cargo tank is obtained, that documents that:

a. The gasoline cargo tank meets the applicable test requirements in 40 CFR 63.425(e) of this permit; and

b. For each gasoline cargo tank failing the test requirements in 40 CFR 63.425(f) or (g), the gasoline cargo tank must either:

(1) Before the repair work is performed on the cargo tank, meet test requirements in 40 CFR 63.425 (g) or (h), or

(2) After repair work is performed on the cargo tank, before or during the tests in 40 CFR 63.425 (g) or (h), subsequently passes, the annual certification test described in 40 CFR 63.425(e).

g. MRC shall ensure that loadings of gasoline cargo tanks, at the truck loading rack, are made only into cargo tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system (ARM 17.8.342 and 40 CFR 63, Subpart R).

h. MRC shall ensure that the terminal's and the cargo tank's vapor recovery systems are connected during each loading of a gasoline cargo tank at the truck loading rack (ARM 17.8.342 and 40 CFR 63, Subpart R).

i. MRC shall install and operate a Continuous Parameter Monitoring System (CPMS) capable of measuring temperature (or an alternative parameter as may be approved by the Administrator) in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs (ARM 17.8.342, ARM 17.8.752, and 40 CFR 63, Subpart R).

j. MRC shall monitor and maintain all pumps, shutoff valves, relief valves and other piping and valves associated with the gas loading rack as described in 40 CFR 60.482-1 through 60.482-10 and 40 CFR 63.648.

k. The VCU stack shall be 35 feet above grade (ARM 17.8.749).

Compliance Demonstration

K.6. MRC shall comply with all test methods and procedures as specified by Subpart R §63.425(a) through (c), and 63.425(e). This shall apply to, but not be limited to, the bulk gasoline and distillate truck loading rack, the vapor processing system, and all gasoline equipment. The gasoline truck loading VCU shall be tested for total organic compounds, and compliance monitored with the emission limitation contained in Section III.K.1 on an every 5-year basis. The initial test was completed on May 7, 2003. MRC shall perform the test methods and procedures as specified in 40 CFR 63.425, Subpart R (ARM 17.8.105, ARM 17.8.342, and 40 CFR 63, Subpart R).

K.7. As required by the Department, the gasoline truck loading VCU shall be tested for CO and NO_x, concurrently, using Method 10 and Method 7, respectively. The tests shall be conducted in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105) to monitor compliance with the emission limitations contained in Sections III.K.2 and 3. The initial test was completed on May 7, 2003 (ARM 17.8.105).

K.8. As required by the Department, the VCU shall be tested for opacity and particulate emissions using Method 9 and Method 5, respectively. The tests shall be conducted in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105) to monitor compliance with the emission limitations contained in Section III.K.4 (ARM 17.8.1213).

K.9. Compliance with the operation of the tank truck loading rack may be monitored by MRC verifying that the tank truck loading rack is equipped with the vapor collection system as specified in Section III.K.5.a (ARM 17.8.1213).

K.10. MRC shall verify that collected vapors are routed to the VCU at all times as required by Section III.K.5b. MRC shall notify the Department in accordance with the requirements of ARM 17.8.110 when the VCU is inoperable (ARM 17.8.1213).

K.11. MRC shall monitor compliance with the calculated gauge pressure during the performance tests required by Section III.K.5c (ARM 17.8.1213).

K.12. MRC shall verify that no pressure-vacuum vent began to open at a system pressure less than 4500 Pa (450 mm of water) and that collected VOC vapors did not pass from one loading position to another loading position as required by Section III.K.5d and e (ARM 17.8.1213).

K.13. MRC shall maintain an on-site log, containing the procedures followed when loading liquid products into vapor-tight gasoline cargo tanks, as required by Section III.K.5.f (ARM 17.8.1213).

K.14. MRC shall verify that the vapor collection systems are compatible during loading and that the vapor recovery systems are connected during loading, as required by Sections III.K.5.g and h (ARM 17.8.1213).

K.15. MRC shall verify that the CPMS is installed and operated continuously, as required by Section III.K.5.i (ARM 17.8.1213).

K.16. MRC shall verify that the pumps, shutoff valves, relief valves, and other piping and valves associated with the gas loading rack meet the requirements as required by Section III.K.5j (ARM 17.8.1213).

K.17. MRC shall verify that the VCU stack is 35 feet above grade as required by Section III.K.5k (ARM 17.8.1213).

Recordkeeping

K.18. Any reports conducted under Subpart R §63.425 must be maintained on site and must be submitted to the Department in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

K.19. Method 10 and Method 7 test reports must be maintained on site and must be submitted to the Department in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

K.20. Method 22 and Method 5 test reports must be maintained on site and must be submitted to the Department in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

K.21. No recordkeeping is necessary for Sections III.K.9, 10, 12, 14, 15, and 17 (ARM 17.8.1212).

K.22. MRC shall maintain on-site records of the gasoline cargo tanks loadings, as required by Section III.K.13 (ARM 17.8.1212).

K.23. MRC shall maintain on-site records, as required by 40 CFR 60.482-1 through 10 and 40 CFR 63.648 (ARM 17.8.1212).

Reporting

K.24. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements. The semiannual reporting, as required by Section III.A.13, shall provide (ARM 17.8.1212):

a. A summary of results of any testing that was performed on the Gasoline Loading Rack;

b. Verification, semiannually, that the loading rack is equipped with both a vapor collection system and a VCU as required by Sections III.K.9 and 10;

c. A summary of the procedures, as required by Section III.K 23;

d. Verification that compliance was monitored, as required by Sections III.K.12, 14, 15, and 17; and

e. A summary of the records kept in accordance with 40 CFR 60.482- through 10 and 40 CFR 63.648.

L. POLYMER-MODIFIED ASPHALT (PMA) UNIT

EU11 – Polymer-Modified Asphalt (PMA) Unit

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
L.1, L.6, L.10, L.13	Opacity	20%	Method 9	As required by the Department	Semiannual
L.2, L.7, L.11, L.13	Open ended valves	Plugged or capped	Verification	Semiannual	
L.3, L.7, L.11, L.13	Pumps	Packing	Verification	Semiannual	
L.4, L.8, L.12, L.13	Pumps valves/ heavy liquid service pressure relief devices/light liquid or heavy liquid service & flanges & other connectors	Standards described in 40 CFR 60.482-8 Repairs promptly as described in 40 CFR 60.482-7e	Monitoring, visual inspections etc. as required by 40 CFR 60.482-8 and 40 CFR 60.482-7e	As required by 40 CFR 60.482-8 and 40 CFR 60.482-7e	
L.5, L.9, L.11, L.13	(3) 750 MBtu/hr fire-tube tank heaters #130, 132, and 133	Fired with only natural gas	Verification	Semiannual	

Condition

L.1. MRC shall not cause to be discharged into the atmosphere from any asphalt tank or modified asphalt tank, exhaust gases with an opacity of 20 percent or greater, averaged over any 6 consecutive minutes (ARM 17.8.752).

L.2. All open-ended valves shall have plugs or caps installed on the open end (ARM 17.8.752).

L.3. All pumps in the asphalt polymerization unit shall be equipped with packing (ARM 17.8.752).

L.4. All pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors shall meet the standards described in 40 CFR 60.482-8. Repairs shall be made promptly as described in 40 CFR 60.482-7e (ARM 17.8.752).

L.5. The three 750-thousand Btu/hr (MBtu/hr) fire-tube tank heaters #130, 132, and 133 shall be fired with natural gas only (ARM 17.8.752).

Compliance Demonstration

L.6. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be a minimum of 6 minutes, unless any one reading is 20% or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

L.7. MRC shall verify that the open-ended valves are plugged or capped, and that the pumps have packing, as required by Sections III.L.2 and 3 (ARM 17.8.1213).

L.8. MRC shall monitor compliance with Section III.L.4 by following the standards described in 40 CFR 60.482-8 and repairs shall be made promptly, as described in 40 CFR 60.482-7e (ARM 17.8.1213).

L.9. MRC shall verify that the three 750 MBtu/hr fire-tube tank heaters #130, 132, and 133 were fired with commercially available natural gas only (ARM 17.8.1213).

Recordkeeping

L.10. Method 9 test reports must be maintained on site and must be submitted to the Department in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

L.11. No recordkeeping is required for Sections III. L.7 and 9 (ARM 17.8.1212).

L.12. Maintain records in accordance with 40 CFR 60.482-8 and in 40 CFR 60.482-7e (ARM 17.8.1212).

Reporting

L.13. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements. The semiannual reporting, as required by Section III.A.13, shall provide (ARM 17.8.1212):

a. A summary of results of any testing that was performed on the PMA;

b. Verification that packing was used as required by Section III.L.7 and verify that the heaters were fired with natural gas as required by Section III.L.9; and

c. Verification that records are maintained in accordance with 40 CFR 60.482-8 and 40 CFR 60.482-7e.

M. COOLING TOWERS

EU12 – Cooling Towers

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
M.1, M.3, M.5, M.7	Opacity	20%	Method 9	As required by the Department	Semiannual
M.2, M.4, M.6, M.7	Cooling water towers	Inspections	pH and hydrocarbon content & appearance of towers and related equip	2 per shift & 1 per shift	

Condition

M.1. MRC shall not cause to be discharged into the atmosphere from the cooling towers with an opacity of 20 percent or greater, averaged over any 6 consecutive minutes (ARM 17.8.752). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

M.2. The cooling towers' water shall be monitored twice per shift for changes, specifically pH and hydrocarbon content. The appearance of the towers and related equipment shall be inspected at least once per shift (ARM 17.8.749).

Compliance Demonstration

M.3. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be minimum of 6 minutes, unless any one reading is 20% or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

M.4. MRC shall maintain a log on site of all inspections completed on the cooling towers (ARM 17.8.1213).

Recordkeeping

M.5. Method 9 test reports must be maintained on site and must be submitted to the Department upon request in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

M.6. Each log entry must include the date, time, potential of hydrogen (pH) and hydrocarbon content, and observer's initials. Furthermore, the every other log entry must include if there was something different about the appearance of the towers and related equipment (ARM 17.8.1212).

Reporting

M.7. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements. The semiannual reporting shall provide (ARM 17.8.1212):

a. A summary of results of any testing that was performed on the Cooling Towers; and

b. A summary of the log as required by Section III.M.6.

N. SODIUM HYDROSULFIDE UNIT

EU13 – Sodium Hydrosulfide Unit

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
N.1, N.3, N.5, N.7	Opacity	20%	Method 9	As required by the Department	Semiannual
N.2, N.4, N.6, N.7	NaHs Unit	40 CFR, Subpart GGG - high quality valves & open-ended valves (plugs or caps) with high quality packing - monitoring & maintenance program as 40 CFR Part 60, Subpart VV	-§60.482-1 to §60.482-10 -may comply with §60.483-1 or §60.483-2 -§60.485 except as provided in §60.593 - compliance w/ §60.486 & §60.487, etc.	In accordance with 40 CFR 60, Subpart GGG	

Conditions

N.1. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

N.2. MRC shall comply with all applicable standards and limitations, and the reporting, record-keeping, and notification requirements, as required by 40 CFR 60, Subpart GGG Standards of Performance for Equipment, Leaks in Petroleum Refineries for the Sodium Hydrosulfide (NaHS) Unit that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR Part 60, Subpart GGG):

a. All valves used shall be high quality valves containing high quality packing;

b. All open-ended valves shall be of the same quality as the valves described above. They shall have plugs or caps installed on the open end; and

c. A monitoring and maintenance program as described under New Source Performance Standards 40 CFR Part 60, Subpart VV shall be instituted.

Compliance Demonstration

N.3. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be minimum of 6 minutes, unless any one reading is 20% or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

N.4. MRC shall monitor compliance as instructed by 40 CFR 60, Subpart GGG, that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR 60, Subpart GGG):

a. Compliance with §60.482-1 to §60.482-10;

b. MRC may elect to comply with §60.483-1 or §60.483-2;

c. Compliance with §60.485 except as provided in §60.593; and

d. Compliance with §60.486 and §60.487.

Recordkeeping

N.5. Method 9 test reports must be maintained on site and must be submitted to the Department upon request in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

N.6. MRC shall keep records in accordance with 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).

Reporting

N.7. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements. The semiannual reporting, as required by Section III.A.13, shall provide (ARM 17.8.1212):

a. A summary of results of any testing that was performed on the NaHS Unit; and

b. A summary of records kept in accordance with 40 CFR 60, Subpart GGG.

O. DIESEL/GAS HYDROTREATER UNIT

EU14 – Diesel/Gas Hydrotreater Unit (natural gas)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
O.1, O.8, O.14, O.20	Opacity	20%	Method 9	As required by the Department	Semiannual
O.2, O9, O.15, O.20	Sulfur in fuel (liquid or solid)	1 lb/MMBtu	HTU heater Pipeline Quality Natural Gas	Ongoing	
O.3, O.10, O.16, 0.20	HTU Unit	40 CFR 60, Subpart QQQ -§60.692-1 to §60.692-5 and §60.693-1 & §60.693-2 except during periods of startup, shutdown, & malfunction. - process drains have water seal traps with covers.	In accordance w/ 40 CFR 60, Subpart QQQ	In accordance w/ 40 CFR 60, Subpart QQQ	Semiannual & In accordance w/ §60.698
O.4, O.11, O.17, O.20	HTU	Analysis of the inlet waste stream of the HTU SWS	4500-S^{2-}D/4500S^{2-}E for H_2S and 4500-NH_3 for NH_3	Twice weekly	Quarterly
O.5, O.12 O.18, O.20	HDS Unit	40 CFR, Subpart GGG - high quality valves & open-ended valves (plugs or caps) w/ high quality packing - monitoring & maintenance program as 40 CFR Part 60, Subpart VV	-§60.482-1 to §60.482-10 -may comply w/ §60.483-1 or §60.483-2 -§60.485 except as provided in §60.593 -compliance w/ §60.486 & §60.487, etc.	In accordance w/ 40 CFR 60, Subpart GGG	Semiannual
O.6, O.13, O.19, O.20	NO_x	0.07 lb/MMBtu, 1.42 lb/hr, or 6.2 TPY	Actual fuel burning rates and emission factors from the most recent compliance source test	Semiannual	
			Method 7	As required by the Department	
			Low NO_x burners	Ongoing	
O.7, O.13, O.19, O.20	CO	0.79 lb/hr, or 3.5 TPY	Actual fuel burning rates and emission factors from the most recent compliance source test	Semiannual	
			Method 10	As required by the Department	

Conditions

O.1. MRC shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the Diesel/Gas Hydrotreater Unit (HTU) furnace stack, that exhibits opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.752). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

O.2. MRC shall not burn liquid or solid fuels containing sulfur in excess of 1 lb/MMBtu fired (ARM 17.8.322(4)).

O.3. MRC shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements, as required by 40 CFR 60, Subpart QQQ Standards of Performance for Petroleum Refining Wastewater Systems for the HTU Unit, that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR Part 60, Subpart QQQ):

a. MRC shall meet the requirements of §60.692-1 to §60.692-5 and §60.693-1 and §60.693-2, except during periods of startup, shutdown, and malfunction; and

b. All process drains shall consist of water seal traps with covers.

O.4. MRC shall operate and maintain a monitoring program that shall analyze H_2S content of the inlet wastewater stream of the HTU SWS unit (ARM 17.8.749).

O.5. MRC shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements as required by 40 CFR 60, Subpart GGG Standards of Performance for Equipment Leaks in Petroleum Refineries for the HTU Unit, which includes, but is not limited to the following (ARM 17.8.340 and 40 CFR Part 60, Subpart GGG):

a. All valves used shall be high quality valves containing high quality packing.

b. All open-ended valves shall be of the same quality as the valves described above. They shall have plugs or caps installed on the open end.

c. A monitoring and maintenance program, as described under New Source Performance Standards 40 CFR Part 60, Subpart VV, shall be instituted.

O.6. The HTU furnace stack's NO_x emissions shall not exceed 0.07 lb/MMBtu, 1.42 lb/hr, or 6.2 TPY (ARM 17.8.752).

O.7. The HTU furnace stack's CO emissions shall not exceed 0.79 lb/hr, or 3.5 TPY (ARM 17.8.752).

Compliance Demonstration

O.8. As required by the Department, MRC shall perform a Method 9 test in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Each observation period shall be a minimum of 6 minutes, unless any one reading is 20% or greater; then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

O.9. MRC shall monitor compliance with Section III.O.2 by firing the HTU heater with only commercially available natural gas (ARM 17.8.1213).

O.10. MRC shall monitor compliance in accordance with 40 CFR 60, Subpart QQQ (ARM 17.8.1213).

O.11. HTU SWS (ARM 17.8.340 and 40CFR 60, Subpart QQQ):

a. MRC shall analyze the inlet wastewater streams of the HTU SWS unit for H_2S and NH_3 concentrations in accordance with standard Methods for the Examination of Water and Wastewater, latest edition, 4500-S^{2-}D/4500S^{2-}E for H_2S and 4500-NH_3 for NH_3, or EPA Methods 376.1 and 350.1, or an equivalent test method as approved by the Department. The chemical analysis frequency for the HTU SWS unit shall be twice weekly when operating. The inlet wastewater stream flow rate shall be continuously monitored and recorded by a flow rate meter. The outlet wastewater stream flow rate shall be assumed

to be equivalent to the inlet flow rate and the effluent concentration will be assumed to be zero for calculating emissions. Emissions of SO_2 and NO_x from the incineration of wastewater gases in boilers #1 and #2 shall be determined by utilizing the engineering measurement procedures outlined in Appendix F of this permit.

b. MRC shall achieve 95% data availability from the flow rate monitoring system of the HTU SWS unit inlet wastewater streams, as monitored by the flow rate monitoring system of the HTU SWS unit inlet wastewater streams (ARM 17.8.749).

c. MRC shall inspect and audit the HTU SWS unit flow rate monitor quarterly.

d. MRC shall develop and implement a standard operating procedures manual and a QA plan for the HTU SWS unit flow rate monitor. MRC shall conduct these audits using the approved procedures and forms (ARM 17.8.749).

O.12. MRC shall monitor compliance, as instructed by 40 CFR 60, Subpart GGG, that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR 60, Subpart GGG):

a. Compliance with §60.482-1 to §60.482-10;

b. MRC may elect to comply with §60.483-1 or §60.483-2;

c. Compliance with §60.485 except as provided in §60.593; and

d. Compliance with §60.486 and §60.487.

O.13. Compliance monitoring for NO_x and CO emission limits for the diesel/gas oil HDS heater shall be based upon actual fuel burning rates and emission factors developed from the most recent compliance source test calculated monthly. As required by the Department, MRC shall conduct a Method 7 and 10 for NO_x and CO, respectively, in accordance with the test methods being used and Section III.A.1 (ARM 17.8.105). Also, MRC shall operate and maintain the low NO_x burners (ARM 17.8.1213).

Recordkeeping

O.14. Method 9 test reports must be maintained on site and must be submitted to the Department upon request in accordance with the test methods being used and Section III.A.1 (ARM 17.8.106).

O.15. No recordkeeping is necessary to maintain compliance with Section III.O.9 (ARM 17.8.1212).

O.16. MRC shall keep records in accordance with 40 CFR 60, Subpart QQQ §60.697 (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

O.17. MRC shall maintain records in accordance with Section III.O.11 (ARM 17.8.1212).

O.18. MRC shall keep records in accordance with 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).

O.19. MRC shall maintain a record on site, the actual fuel burning rates of the HTU heater and submit the log to the Department upon request. The record must include the date, time, actual fuel burning rates, calculated emissions, and reviewer's initials. Method 7 & 10 test reports must be maintained on site and must be submitted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

Reporting

O.20. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements. The semiannual and quarterly reporting, as required by Sections III.A.13 and 15, shall provide (ARM 17.8.1212):

a. A summary of results of any testing that was performed on the HTU;

b. Verification that only commercially available natural gas was fired in the HTU heater;

c. A summary compliance report as required by §60.698;

d. A summary of records kept in accordance with 40 CFR 60, Subpart GGG; and

e. A summary of the log as required by Section III.O.19.

SECTION IV - NON-APPLICABLE REQUIREMENTS

Air Quality Administrative Rules of Montana (ARM) and Federal Regulations identified as not applicable to the facility or to a specific emissions unit at the time of the permit issuance are listed below (ARM 17.8.1214). The following list does not preclude the need to comply with any new requirements that may become applicable during the permit term.

A. FACILITY-WIDE

The following table contains non-applicable requirements administrated by the Air Resources Management Bureau of the Department of Environmental Quality.

Rule Citation	Reason
40 CFR 82 (except Subpart F)	This rule does not apply to any of the emitting units at the facility at the time of permit issuance.
183(e) FCAA 183(f) FCAA	These rules are not applicable to the facility
40 CFR 60, Subpart J	In 1983 two existing crude heaters were replaced with one crude furnace/reboiler with the same combined heat capacity. Reconstruction means the replacement of components of an existing facility to such an extent that the fixed capital cost of the new component exceeds 50% of the fixed capital cost that would be required to construct a comparable, entirely new facility (40 CFR Part 60.15(b)). Therefore, the crude furnace/reboiler is exempt from NSPS, Subpart J.
40 CFR 60, Subpart VV 40 CFR 63, Subpart H	These rule are not applicable to the facility, but may become applicable through the applicability determination of 40 CFR 63 Subpart CC.

B. EMISSION UNITS

The permit application identified applicable requirements: non-applicable requirements for individual or specific emission units were not listed. The Department has listed all non-applicable requirements in Section IV.A. These requirements relate to each specific unit, as well as facility wide.

SECTION V GENERAL PERMIT CONDITIONS

A. Compliance Requirements

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(a)-(c)&(e), §1206(6)(c)&(b)

1. The permittee must comply with all conditions of the permit. Any noncompliance with the terms or conditions of the permit constitutes a violation of the Montana Clean Air Act, and may result in enforcement action, permit modification, revocation and reissuance, or termination, or denial of a permit renewal application under ARM Title 17, Chapter 8, Subchapter 12.

2. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

3. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. If appropriate, this factor may be considered as a mitigating factor in assessing a penalty for noncompliance with an applicable requirement if the source demonstrates that both the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations, and that such health, safety or environmental impacts were unforeseeable and could not have otherwise been avoided.

4. The permittee shall furnish to the Department, within a reasonable time set by the Department (not to be less than 15 days), any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of those records that are required to be kept pursuant to the terms of the permit. This subsection does not impair or otherwise limit the right of the permittee to assert the confidentiality of the information requested by the Department, as provided in 75-2-105, MCA.

5. Any schedule of compliance for applicable requirements with which the source is not in compliance with at the time of permit issuance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it was based.

6. For applicable requirements that will become effective during the permit term, the source shall meet such requirements on a timely basis unless a more detailed plan or schedule is required by the applicable requirement or the Department.

B. Certification Requirements

ARM 17.8, Subchapter 12, Operating Permit Program §1207 and §1213(7)(a)&(c)-(d)

1. Any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12, shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

2. Compliance certifications shall be submitted by February 15 of each year, or more frequently if otherwise specified in an applicable requirement or elsewhere in the permit. Each certification must include the required information for the previous calendar year (i.e., January 1 – December 31).

3. Compliance certifications shall include the following:

   a. The identification of each term or condition of the permit that is the basis of the certification;

   b. The identification of the method(s) or other means used by the owner or operator for determining the status of compliance with each term and condition during the certification period, consistent with ARM 17.8.1212;

   c. The status of compliance with each term and condition for the period covered by the certification, *including whether compliance during the period was continuous or intermittent* (based on the method or means identified in ARM 17.8.1213(7)(c)(ii), as described above); and

   d. Such other facts as the Department may require to determine the compliance status of the source.

4. All compliance certifications must be submitted to the Environmental Protection Agency (EPA), as well as to the Department, at the addresses listed in the Notification Addresses Appendix of this permit.

C. Permit Shield

ARM 17.8, Subchapter 12, Operating Permit Program §1214(1)-(4)

1. The applicable requirements and non-federally enforceable requirements are included and specifically identified in this permit, and the permit includes a precise summary of the requirements not applicable to the source. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements and any non-federally enforceable requirements as of the date of permit issuance.

2. The permit shield described in 1 above shall remain in effect during the appeal of any permit action (renewal, revision, reopening, or revocation and reissuance) to the Board of Environmental Review (Board), until such time as the Board renders its final decision.

3. Nothing in this permit alters or affects the following:

   a. The provisions of Section 7603 of the FCAA, including the authority of the administrator under that section;

   b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

   c. The applicable requirements of the Acid Rain Program, consistent with Section 7651g(a) of the FCAA;

   d. The ability of the administrator to obtain information from a source pursuant to Section 7414 of the FCAA;

   e. The ability of the Department to obtain information from a source pursuant to the Montana Clean Air Act, Title 75, Chapter 2, MCA;

   f. The emergency powers of the Department under the Montana Clean Air Act, Title 75, Chapter 2, MCA; and

g. The ability of the Department to establish or revise requirements for the use of Reasonably Available Control Technology (RACT) as defined in ARM Title 17, Chapter 8. However, if the inclusion of a RACT into the permit pursuant to ARM Title 17, Chapter 8, Subchapter 12, is appealed to the Board, the permit shield, as it applies to the source's existing permit, shall remain in effect until such time as the Board has rendered its final decision.

4. Nothing in this permit alters or affects the ability of the Department to take enforcement action for a violation of an applicable requirement or permit term demonstrated pursuant to ARM 17.8.106, Source Testing Protocol.

5. Pursuant to ARM 17.8.132, for the purpose of submitting a compliance certification, nothing in these rules shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance. However, when compliance or noncompliance is demonstrated by a test or procedure provided by permit or other applicable requirements, the source shall then be presumed to be in compliance or noncompliance unless that presumption is overcome by other relevant credible evidence.

6. The permit shield will not extend to minor permit modifications or changes not requiring a permit revision (see Sections I & J).

7. The permit shield will extend to significant permit modifications and transfer or assignment of ownership (see Sections K & N).

D. Monitoring, Recordkeeping, and Reporting Requirements
ARM 17.8, Subchapter 12, Operating Permit Program §1212(2)&(3)

1. Unless otherwise provided in this permit, the permittee shall maintain compliance monitoring records that include the following information:

   a. The date, place as defined in the permit, and time of sampling or measurement;

   b. The date(s) analyses were performed;

   c. The company or entity that performed the analyses;

   d. The analytical techniques or methods used;

   e. The results of such analyses; and

   f. The operating conditions at the time of sampling or measurement.

2. The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. All monitoring data, support information, and required reports and summaries may be maintained in computerized form at the plant site if the information is made available to Department personnel upon request, which may be for either hard copies or computerized format. Strip-charts must be maintained in their original form at the plant site and shall be made available to Department personnel upon request.

3. The permittee shall submit to the Department, at the addresses located in the Notification Addresses Appendix of this permit, reports of any required monitoring by February 15 and August 15 of each year, or more frequently if otherwise specified in an applicable requirement or elsewhere in the permit. The monitoring report submitted on February 15 of each year must include the required monitoring information for the period of July 1 through December 31 of the previous year. The monitoring report submitted on August 15 of each year must include the required monitoring information for the period of January 1 through June 30 of the current year. All instances of deviations from the permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official, consistent with ARM 17.8.1207.

E. Prompt Deviation Reporting

ARM 17.8, Subchapter 12, Operating Permit Program §1212(3)(c)

The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. To be considered prompt, deviations shall be reported as part of the routine reporting requirements under ARM 17.8.1212(3)(b) and, if applicable, in accordance with the malfunction reporting requirements under ARM 17.8.110, unless otherwise specified in an applicable requirement.

F. Emergency Provisions

ARM 17.8, Subchapter 12, Operating Permit Program §1201(13) and §1214(5), (6)&(8)

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation and causes the source to exceed a technology-based emission limitation under this permit due to the unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of reasonable preventive maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates through properly signed, contemporaneous logs, or other relevant evidence, that:

   a. An emergency occurred and the permittee can identify the cause(s) of the emergency;

   b. The permitted facility was, at the time, being properly operated;

   c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in the permit; and

   d. The permittee submitted notice of the emergency to the Department within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirements of ARM 17.8.1212(3)(c). This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

3. These emergency provisions are in addition to any emergency, malfunction or upset provision contained in any applicable requirement.

G. Inspection and Entry

ARM 17.8, Subchapter 12, Operating Permit Program §1213(3)&(4)

1. Upon presentation of credentials and other requirements as may be required by law, the permittee shall allow the Department, the administrator, or an authorized representative (including an authorized contractor acting as a representative of the Department or the administrator) to perform the following:

   a. Enter the premises where a source required to obtain a permit is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

   c. Inspect at reasonable times any facilities, emission units, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

   d. As authorized by the Montana Clean Air Act and rules promulgated thereunder, sample or monitor, at reasonable times, any substances or parameters at any location for the purpose of assuring compliance with the permit or applicable requirements.

2. The permittee shall inform the inspector of all workplace safety rules or requirements at the time of inspection. This section shall not limit in any manner the Department's statutory right of entry and inspection as provided for in 75-2-403, MCA.

H. Fee Payment

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(f) and ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation, and Open Burning Fees §505(3)-(5) (STATE ONLY)

1. The permittee must pay application and operating fees, pursuant to ARM Title 17, Chapter 8, Subchapter 5.

2. Annually, the Department shall provide the permittee with written notice of the amount of the fee and the basis for the fee assessment. The air quality operation fee is due 30 days after receipt of the notice, unless the fee assessment is appealed pursuant to ARM 17.8.511. If any portion of the fee is not appealed, that portion of the fee that is not appealed is due 30 days after receipt of the notice. Any remaining fee, which may be due after the completion of an appeal, is due immediately upon issuance of the Board's decision or upon completion of any judicial review of the Board's decision.

3. If the permittee fails to pay the required fee (or any required portion of an appealed fee) within 90 days of the due date of the fee, the Department may impose an additional assessment of 15% of the fee (or any required portion of an appealed fee) or $100, whichever is greater, plus interest on the fee (or any required portion of an appealed fee), computed at the interest rate established under 15-31-510(3), MCA.

I. Minor Permit Modifications
ARM 17.8, Subchapter 12, Operating Permit Program §1226(3)&(11)

1. An application for a minor permit modification need only address in detail those portions of the permit application that require revision, updating, supplementation, or deletion, and may reference any required information that has been previously submitted.

2. The permit shield under ARM 17.8.1214 will not extend to any minor modifications processed pursuant to ARM 17.8.1226.

J. Changes Not Requiring Permit Revision
ARM 17.8, Subchapter 12, Operating Permit Program §1224(1)-(3), (5)&(6)

1. The permittee is authorized to make changes within the facility as described below, provided the following conditions are met:

   a. The proposed changes do not require the permittee to obtain a Montana Air Quality Permit under ARM Title 17, Chapter 8, Subchapter 7;

   b. The proposed changes are not modifications under Title I of the FCAA, or as defined in ARM Title 17, Chapter 8, Subchapters 8, 9, or 10;

   c. The emissions resulting from the proposed changes do not exceed the emissions allowable under this permit, whether expressed as a rate of emissions or in total emissions;

   d. The proposed changes do not alter permit terms that are necessary to enforce applicable emission limitations on emission units covered by the permit; and

   e. The facility provides the administrator and the Department with written notification at least 7 days prior to making the proposed changes.

2. The permittee and the Department shall attach each notice provided pursuant to 1.e above to their respective copies of this permit.

3. Pursuant to the conditions above, the permittee is authorized to make Section 502(b)(10) changes, as defined in ARM 17.8.1201(30), without a permit revision. For each such change, the written notification required under 1.e above shall include a description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

4. The permittee may make a change not specifically addressed or prohibited by the permit terms and conditions without requiring a permit revision, provided the following conditions are met:

   a. Each proposed change does not weaken the enforceability of any existing permit conditions;

   b. The Department has not objected to such change;

   c. Each proposed change meets all applicable requirements and does not violate any existing permit term or condition; and

d. The permittee provides contemporaneous written notice to the Department and the administrator of each change that is above the level for insignificant emission units as defined in ARM 17.8.1201(22) and 17.8.1206(3), and the written notice describes each such change, including the date of the change, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

5. The permit shield authorized by ARM 17.8.1214 shall not apply to changes made pursuant to ARM 17.8.1224(3) and (5), but is applicable to terms and conditions that allow for increases and decreases in emissions pursuant to ARM 17.8.1224(4).

K. Significant Permit Modifications

ARM 17.8, Subchapter 12, Operating Permit Program §1227(1), (3)&(4)

1. The modification procedures set forth in 2 below must be used for any application requesting a significant modification of this permit. Significant modifications include the following:

   a. Any permit modification that does not qualify as either a minor modification or as an administrative permit amendment;

   b. Every significant change in existing permit monitoring terms or conditions;

   c. Every relaxation of permit reporting or recordkeeping terms or conditions that limit the Department's ability to determine compliance with any applicable rule, consistent with the requirements of the rule; or

   d. Any other change determined by the Department to be significant.

2. Significant modifications shall meet all requirements of ARM Title 17, Chapter 8, including those for applications, public participation, and review by affected states and the administrator, as they apply to permit issuance and renewal, except that an application for a significant permit modification need only address in detail those portions of the permit application that require revision, updating, supplementation or deletion.

3. The permit shield provided for in ARM 17.8.1214 shall extend to significant modifications.

L. Reopening for Cause

ARM 17.8, Subchapter 12, Operating Permit Program §1228(1)&(2)

1. This permit may be reopened and revised under the following circumstances:

   a. Additional applicable requirements under the FCAA become applicable to the facility when the permit has a remaining term of 3 or more years. Reopening and revision of the permit shall be completed not later than 18 months after promulgation of the applicable requirement. No reopening is required under ARM 17.8.1228(1)(a) if the effective date of the applicable requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms or conditions have been extended pursuant to ARM 17.8.1220(12) or 17.8.1221(2);

   b. Additional requirements (including excess emission requirements) become applicable to an affected source under the Acid Rain Program. Upon approval by the administrator, excess emission offset plans shall be deemed incorporated into the permit;

c. The Department or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit; or

d. The administrator or the Department determines that the permit must be revised or revoked and reissued to ensure compliance with the applicable requirements.

M. Permit Expiration and Renewal

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(g), §1220(11)&(12), and §1205(2)(d)

1. This permit is issued for a fixed term of 5 years.

2. Renewal of this permit is subject to the same procedural requirements that apply to permit issuance, including those for application, content, public participation, and affected state and administrator review.

3. Expiration of this permit terminates the permittee's right to operate unless a timely and administratively complete renewal application has been submitted consistent with ARM 17.8.1221 and 17.8.1205(2)(d). If a timely and administratively complete application has been submitted, all terms and conditions of the permit, including the application shield, remain in effect after the permit expires until the permit renewal has been issued or denied.

4. For renewal, the permittee shall submit a complete Air Quality Operating Permit application to the Department not later than 6 months prior to the expiration of this permit, unless otherwise specified. If necessary to ensure that the terms of the existing permit will not lapse before renewal, the Department may specify, in writing to the permittee, a longer time period for submission of the renewal application. Such written notification must be provided at least 1 year before the renewal application due date established in the existing permit.

N. Severability Clause

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(i)&(l)

1. The administrative appeal or subsequent judicial review of the issuance by the Department of an initial permit under this subchapter shall not impair in any manner the underlying applicability of all applicable requirements, and such requirements continue to apply as if a final permit decision had not been reached by the Department.

2. If any provision of a permit is found to be invalid, all valid parts that are severable from the invalid part remain in effect. If a provision of a permit is invalid in one or more of its applications, the provision remains in effect in all valid applications that are severable from the invalid applications.

O. Transfer or Assignment of Ownership

ARM 17.8, Subchapter 12, Operating Permit Program §1225(2)&(4)

1. If an administrative permit amendment involves a change in ownership or operational control, the applicant must include in its request to the Department a written agreement containing a specific date for the transfer of permit responsibility, coverage and liability between the current and new permittee.

2. The permit shield provided for in ARM17.8.1214 shall not extend to administrative permit amendments.

P. Emissions Trading, Marketable Permits, Economic Incentives
ARM 17.8, Subchapter 12, Operating Permit Program §1226(2)

Notwithstanding ARM 17.8.1226(1) and (7), minor air quality operating permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in the Montana State Implementation Plan or in applicable requirements promulgated by the administrator.

Q. No Property Rights Conveyed
ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(d)

This permit does not convey any property rights of any sort, or any exclusive privilege.

R. Testing Requirements
ARM 17.8, Subchapter 1, General Provisions §105

The permittee shall comply with ARM 17.8.105.

S. Source Testing Protocol
ARM 17.8, Subchapter 1, General Provisions §106

The permittee shall comply with ARM 17.8.106.

T. Malfunctions
ARM 17.8, Subchapter 1, General Provisions §110

The permittee shall comply with ARM 17.8.110.

U. Circumvention
ARM 17.8, Subchapter 1, General Provisions §111

The permittee shall comply with ARM 17.8.111.

V. Motor Vehicles
ARM 17.8, Subchapter 3, Emission Standards §325

The permittee shall comply with ARM 17.8.325.

W. Annual Emissions Inventory
ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation and Open Burning Fees §505 (STATE ONLY)

The permittee shall supply the Department with annual production and other information for all emission units necessary to calculate actual or estimated actual amount of air pollutants emitted during each calendar year. Information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request, unless otherwise specified in this permit. Information shall be in the units required by the Department.

X. Open Burning
ARM 17.8, Subchapter 6, Open Burning §604, 605 and 606

The permittee shall comply with ARM 17.8.604, 605 and 606.

Y. Montana Air Quality Permits

ARM 17.8, Subchapter 7, Permit, Construction and Operation of Air Contaminant Sources §745 and 764 (ARM 17.8.745(1) and 764(1)(b) are STATE ENFORCEABLE ONLY until approval by the EPA as part of the SIP)

1. Except as specified, no person shall construct, install, alter or use any air contaminant source or stack associated with any source without first obtaining a permit from the Department or Board. A permit is not required for those sources or stacks as specified by ARM 17.8.744(1)(a)-(k).

2. The permittee shall comply with ARM 17.8.743, 744, 745, 748, and 764.

3. ARM 17.8.745(1) specifies de minimis changes as construction or changed conditions of operation at a facility holding a Montana Air Quality Permit issued under Chapter 8 that does not increase the facility's potential to emit by more than 15 tons per year of any pollutant, except (STATE ENFORCEABLE ONLY until approved by the EPA as part of the SIP):

   a. Any construction or changed condition that would violate any condition in the facility's existing Montana Air Quality Permit or any applicable rule contained in Chapter 8 is prohibited, except as provided in ARM 17.8.745(2);

   b. Any construction or changed conditions of operation that would qualify as a major modification under Subchapters 8, 9 or 10 of Chapter 8;

   c. Any construction or changed condition of operation that would affect the plume rise or dispersion characteristic of emissions that would cause or contribute to a violation of an ambient air quality standard or ambient air increment as defined in ARM 17.8.804;

   d. Any construction or improvement project with a PTE more than 15 tons per year may not be artificially split into smaller projects to avoid Montana Air Quality permitting; or

   e. Emission reductions obtained through offsetting within a facility are not included when determining the potential emission increase from construction or changed conditions of operation, unless such reductions are made federally enforceable.

4. Any facility making a de minimis change pursuant to ARM 17.8.745(1) shall notify the Department if the change would include a change in control equipment, stack height, stack diameter, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1). (STATE ENFORCEABLE ONLY until approval by the EPA as part of the SIP)

Z. National Emission Standard for Asbestos

40 CFR, Part 61, Subpart M

The permittee shall not conduct any asbestos abatement activities except in accordance with 40 CFR 61, Subpart M (National Emission Standard for Hazardous Air Pollutants for Asbestos).

AA. Asbestos

ARM 17.74, Subchapter 3, General Provisions and Subchapter 4, Fees
The permittee shall comply with ARM 17.74.301, *et seq*., and ARM 17.74.401, *et seq*. (State only)

BB. Stratospheric Ozone Protection – Servicing of Motor Vehicle Air Conditioners
40 CFR, Part 82, Subpart B

If the permittee performs a service on motor vehicles and this service involves ozone-depleting substance/refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR 82, Subpart B.

CC. Stratospheric Ozone Protection – Recycling and Emission Reductions
40 CFR, Part 82, Subpart F

The permittee shall comply with the standards for recycling and emission reductions in 40 CFR 82, Subpart F, except as provided for MVACs in Subpart B.

1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.

2. Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.

3. Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technical certification program pursuant to §82.161.

4. Persons disposing of small appliances, MVACs and MVAC-like (as defined at §82.152) appliances must comply with recordkeeping requirements pursuant to §82.166.

5. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.

6. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

DD. Emergency Episode Plan

The permittee shall comply with the requirements contained in Chapter 9.7 of the State of Montana Air Quality Control Implementation Plan.

Each major source emitting 100 tons per year located in a Priority I Air Quality Control Region, shall submit to the Department a legally enforceable Emergency Episode Action Plan (EEAP) that details how the source will curtail emissions during an air pollutant emergency episode. The industrial EEAP shall be in accordance with the Department's EEAP and shall be submitted according to a timetable developed by the Department, following Priority I reclassification.

EE. Definitions

Terms not otherwise defined in this permit or in the Definitions and Abbreviations Appendix of this permit, shall have the meaning assigned to them in the referenced regulations.

APPENDICES

APPENDIX A
INSIGNIFICANT EMISSION UNITS

Disclaimer: The information in this appendix is not State or Federally enforceable, but is presented to assist MRC, the permitting authority, inspectors, and the public.

Pursuant to ARM 17.8.1201(22)(a), an insignificant emission unit means any activity or emission unit located within a source that: (i) has a PTE less than five tons per year of any regulated pollutant; (ii) has a PTE less than 500 lb/yr of lead; (iii) has a PTE less than 500 lb/yr of HAPs listed pursuant to Section 7412 (b) of the FCAA; and (iv) is not regulated by an applicable requirement, other than a generally applicable requirement that applies to all emission units subject to Subchapter 12.

List of Insignificant Activities:

The following table of insignificant sources and/or activities was provided by MRC. Because there are no requirements to update such a list, the emission units and/or activities may change from those specified in the table.

Emissions Unit ID	Description	Associated Unit(s)
IEU01	FCC Catalyst Heater	Cat Poly Unit
IEU02	Compressor Gas	Cat Poly Unit
IEU03	Reactor Catalyst Heater	Cat Reformer Unit
IEU04	Asphalt Heater #50	Storage Loadout Unit
IEU05	Asphalt Heater #55	Storage Loadout Unit
IEU06	Asphalt Heater #56	Storage Loadout Unit
IEU07	Asphalt Heater #110	Storage Loadout Unit
IEU08	Asphalt Heater #112	Storage Loadout Unit
IEU09	Loadout Facilities JP-4	Storage Loadout Unit
IEU10	Loadout Facilities Kerosene	Storage Loadout Unit
IEU11	Loadout Facilities Diesel	Storage Loadout Unit
IEU12	Loadout Facilities Jet A	Storage Loadout Unit
IEU13	Loadout Facilities Standard Valves Light	Storage Loadout Unit
IEU14	Loadout Facilities Standard Valves Heavy	Storage Loadout Unit
IEU15	Loadout Facilities JP-8	Storage Loadout Unit
IEU16	Loadout Facilities Naphtha	Storage Loadout Unit
IEU17	Loadout Facilities Fuel Oil #5	Storage Loadout Unit
IEU18	Loadout Facilities Crude	Storage Loadout Unit
IEU19	Loadout Facilities Asphalt	Storage Loadout Unit
IEU20	Drains	FCC Unit, Cat Poly Unit Cat, Reformer Unit, Storage Loadout Unit, Alky Unit, NASH Unit, HTU Unit, Hydrogen Unit
IEU21	Relief Valves	Crude Unit, FCC Unit, Cat Poly Unit, Cat Reformer Unit, Storage Loadout Unit, Utility Unit, Alky Unit, NASH Unit, HTU Unit, Asphalt Polymerization Unit
IEU22	Open Valves	Crude Unit, FCC Unit, Cat Poly Unit, Cat Reformer Unit, Storage Loadout Unit, Utility Unit, NASH Unit, Hydrogen Unit
IEU23	Flanges	Crude Unit, FCC Unit, Cat Poly Unit, Cat Reformer Unit, Storage Loadout Unit, Utility Unit, Alky Unit, NASH Unit, HTU Unit, Hydrogen Unit, Asphalt Polymerization Unit
IEU24	Pumps Light	Crude Unit, FCC Unit, Cat Reformer Unit, Storage Loadout Unit, HTU Unit
IEU25	Storage Tanks Heavy	Storage Loadout Unit

IEU26	Storage Valves Heavy	Crude Unit, Cat Poly Unit, Reformer Unit, Storage Loadout Unit, HTU Unit, Asphalt Polymerization Unit
IEU27	Pumps Heavy	Crude Unit, Cat Poly Unit, Cat Reformer Unit, Storage Loadout Unit, HTU Unit, Asphalt Polymerization Unit
IEU28	Chemical Additive Pots	Crude Unit, Cat Poly Unit, Cat Reformer Unit, Storage Loadout Unit, Utility Unit, Asphalt Polymerization Unit
IEU29	Fuel Gas Open Valves	Utility Unit
IEU30	Fuel Gas Flanges	Utility Unit
IEU31	Fuels Gas Relief Valves	Utility Unit
IEU32	Flare Pilot Gas	Utility Unit
IEU33	Standard Valves Gas	FCC Unit, Alky Unit, NASH Unit, HTU Unit Hydrogen Unit
IEU34	Lubricator	Cat Reformer Unit, HTU Unit
IEU35	Standard Valves Light	HTU Unit
IEU36	Standard Valves Hydrogen	FCC Unit Cat Reformer Unit HTU Unit Hydrogen Unit
IEU37	Compressor Hydrogen	Cat Reformer Unit, HTU Unit
IEU38	Chemical Additive Tanks	Hydrogen Unit

APPENDIX B
DEFINITIONS and ABBREVIATIONS

"Act" means the Clean Air Act, as amended, 42 U.S. 7401, *et seq*.

"Administrative permit amendment" means an air quality operating permit revision that:

(a) Corrects typographical errors;

(b) Identifies a change in the name, address or phone number of any person identified in the air quality operating permit, or identifies a similar minor administrative change at the source;

(c) Requires more frequent monitoring or reporting by MRC;

(d) Requires changes in monitoring or reporting requirements that the Department deems to be no less stringent than current monitoring or reporting requirements;

(e) Allows for a change in ownership or operational control of a source if the Department has determined that no other change in the air quality operating permit is necessary, consistent with ARM 17.8.1225; or

(f) Incorporates any other type of change that the Department has determined to be similar to those revisions set forth in (a)-(e), above.

"Applicable requirement" means all of the following as they apply to emission units in a source requiring an Air Quality Operating Permit (including requirements that have been promulgated or approved by the Department or the administrator through rule making at the time of issuance of the Air Quality Operating Permit, but have future-effective compliance dates, provided that such requirements apply to sources covered under the operating permit):

(a) Any standard, rule, or other requirement, including any requirement contained in a consent decree or judicial or administrative order entered into or issued by the Department, that is contained in the Montana State Implementation Plan approved or promulgated by the administrator through rule making under Title I of the FCAA;

(b) Any federally enforceable term, condition or other requirement of any Montana Air Quality Permit issued by the Department under Subchapters 7, 8, 9 and 10 of this chapter, or pursuant to regulations approved or promulgated through rule making under Title I of the FCAA, including parts C and D;

(c) Any standard or other requirement under Section 7411 of the FCAA, including Section 7411(d);

(d) Any standard or other requirement under Section 7412 of the FCAA, including any requirement concerning accident prevention under Section 7412(r)(7), but excluding the contents of any risk management plan required under Section 7412(r);

(e) Any standard or other requirement of the acid rain program under Title IV of the FCAA or regulations promulgated thereunder;

(f) Any requirements established pursuant to Section 7661c(b) or Section 7414(a)(3) of the FCAA;

(g) Any standard or other requirement governing solid waste incineration, under Section 7429 of the FCAA;

(h) Any standard or other requirement for consumer and commercial products, under Section 7511b(e) of the FCAA;

(i) Any standard or other requirement for tank vessels, under Section 7511b(f) of the FCAA;

(j) Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the FCAA, unless the administrator determines that such requirements need not be contained in an Air Quality Operating Permit;

(k) Any national ambient air quality standard or increment or visibility requirement under part C of Title I of the FCAA, but only as it would apply to temporary sources permitted pursuant to Section 7661c(e) of the FCAA; or

(l) Any federally enforceable term or condition of any Air Quality Open Burning Permit issued by the Department under subchapter 6.

"Department" means the Montana Department of Environmental Quality.

"Emissions unit" means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under Section 7412(b) of the FCAA. This term is not meant to alter or affect the definition of the term "unit" for purposes of Title IV of the FCAA.

"Excess Emissions" means any visible emissions from a stack or source, viewed during the visual surveys, that meets or exceeds 15% opacity (or 30% opacity if associated with a 40% opacity limit) during normal operating conditions.

"FCAA" means the Federal Clean Air Act, as amended.

"Federally enforceable" means all limitations and conditions which are enforceable by the administrator, including those requirements developed pursuant to 40 CFR Parts 60 and 61, requirements within the Montana State Implementation Plan, and any permit requirement established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 51, Subpart I, including operating permits issued under an Environmental Protection Agency approved program that is incorporated into the Montana State Implementation Plan and expressly requires adherence to any permit issued under such program.

"Fugitive emissions" means those emissions, which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

"General air quality operating permit" or **"general permit"** means an Air Quality Operating Permit that meets the requirements of ARM 17.8.1222, covers multiple sources in a source category, and is issued in lieu of individual permits being issued to each source.

"Hazardous air pollutant" means any air pollutant listed as a hazardous air pollutant pursuant to Section 112(b) of the FCAA.

"Non-federally enforceable requirement" means the following as they apply to emissions units in a source requiring an Air Quality Operating Permit:

(a) Any standard, rule, or other requirement, including any requirement contained in a consent decree, or judicial or administrative order entered into or issued by the Department, that is not contained in the Montana State Implementation Plan approved or promulgated by the administrator through rule making under Title I of the FCAA;

(b) Any term, condition or other requirement contained in any Montana Air Quality Permit issued by the Department under Subchapters 7, 8, 9 and 10 of this chapter that is not federally enforceable;

(c) Does not include any Montana ambient air quality standard contained in Subchapter 2 of this chapter.

"Permittee" means the owner or operator of any source subject to the permitting requirements of this subchapter, as provided in ARM 17.8.1204, that holds a valid Air Quality Operating Permit or has submitted a timely and complete permit application for issuance, renewal, amendment, or modification pursuant to this subchapter.

"Regulated air pollutant" means the following:

(a) Nitrogen oxides or any volatile organic compounds;

(b) Any pollutant for which a national ambient air quality standard has been promulgated;

(c) Any pollutant that is subject to any standard promulgated under Section 7411 of the FCAA;

(d) Any Class I or II substance subject to a standard promulgated under or established by Title VI of the FCAA; or

(e) Any pollutant subject to a standard or other requirement established or promulgated under Section 7412 of the FCAA, including but not limited to the following:

(i) Any pollutant subject to requirements under Section 7412(j) of the FCAA. If the administrator fails to promulgate a standard by the date established in Section 7412(e) of the FCAA, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established in section 7412(e) of the FCAA;

(ii) Any pollutant for which the requirements of Section 7412(g)(2) of the FCAA have been met but only with respect to the individual source subject to Section 7412(g)(2) requirement.

"Responsible official" means one of the following:

(a) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representative is approved in advance by the Department.

(b) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

(c) For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a regional administrator of the environmental protection agency).

(d) For affected sources: the designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the FCAA or the regulations promulgated thereunder are concerned, and the designated representative for any other purposes under this subchapter.

Abbreviations:

ARM	Administrative Rules of Montana
ASTM	American Society of Testing Materials
BACT	Best Available Control Technology
BDT	bone dry tons
Btu	British thermal unit
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic foot
dscfm	dry standard cubic foot per minute
EEAP	Emergency Episode Action Plan
EPA	U.S. Environmental Protection Agency
EPA Method	Test methods contained in 40 CFR 60, Appendix A
EU	emissions unit
FCAA	Federal Clean Air Act
gr	grains
HAP	hazardous air pollutant
IEU	insignificant emissions unit
Mbdft	thousand board feet
Method 5	40 CFR 60, Appendix A, Method 5
Method 9	40 CFR 60, Appendix A, Method 9
MMbdft	million board feet
MMBtu	million British thermal units
NO_X	oxides of nitrogen
NO_2	nitrogen dioxide
O_2	oxygen
Pb	lead
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in size
psi	pounds per square inch
scf	standard cubic feet
SIC	Source Industrial Classification
SO_2	sulfur dioxide
SO_X	oxides of sulfur
TPD	tons per day
TPY	tons per year
U.S.C.	United States Code
VE	visible emissions
VOC	volatile organic compound

APPENDIX C
NOTIFICATION ADDRESSES

Compliance Notifications:

Montana Department of Environmental Quality
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901
Helena, MT 59620-0901

United States EPA
Air Program Coordinator
Region VIII, Montana Office
10 W. 15th Street, Suite 3200
Helena, MT 59626

Permit Modifications:

Montana Department of Environmental Quality
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901
Helena, MT 59620-0901

Office of Partnerships and Regulatory Assistance
Air and Radiation Program
US EPA Region VIII 8P-AR
999 18th Street, Suite 300
Denver, CO 80202-2466

APPENDIX D
AIR QUALITY INSPECTOR INFORMATION

Disclaimer: The information in this appendix is not State or Federally enforceable but is presented to assist MRC, permitting authority, inspectors, and the public.

Direction to Plant: MRC is located at 1900 10th Street Northeast along the Missouri River in the city of Great Falls, Montana.

Safety Equipment Required: Hardhat, steel-toed shoes/boots, and hearing protection (ear plugs will be provided by MRC) are required at the facility. A detailed safety manual is available at the site, and a MRC employee will conduct a safety briefing for any inspector prior to entering the plant area.

Facility Plot Plan: The facility plot plan was submitted as part of the application on May 17, 1995.

APPENDIX E
AMBIENT AIR MONITORING PLAN

1. This Ambient Air Monitoring Plan is required by Air Quality Permit OP2161-00, that applies to Montana Refining Company's (MRC) crude oil refinery located at 1900 10th Street, in Great Falls, Montana. This monitoring plan may be modified by the Department of Environmental Quality (Department). All requirements of this plan are considered conditions of the permit.

2. MRC shall operate and maintain one air monitoring site northeast of the refinery. The exact location of the monitoring site must be approved by the Department and meet all the siting requirements contained in the Montana Quality Assurance Manual, including revisions, the EPA Quality Assurance Manual, including revisions, and Parts 53 and 58 of the Code of Federal Regulations, or any other requirements specified by the Department.

3. MRC shall continue air monitoring for at least two years after installation of the monitor in section 2 above. The air monitoring data will be reviewed by the Department and the Department will determine if continued monitoring or additional monitoring is warranted. The Department may require continued air monitoring to track long-term impacts of emissions from the facility or require additional ambient air monitoring or analyses if any changes take place in regard to quality and/or quantity of emissions or the area of impact from the emissions.

4. MRC shall monitor the following parameters at the site and frequencies described below:

AIRS # and Site Name	UTM Coordinates	Parameter	Frequency
30-013-20xx	Zone 12 N 5263700 E 478600	SO_2[1] Wind Speed and Direction, Standard Deviation of Wind Direction (sigma theta)	Continuous " " " "

[1]SO_2= sulfur dioxide

5. Data recovery for all parameters shall be at least 80% computed on a quarterly and annual basis. The Department may require continued monitoring if this condition is not met.

6. Any ambient air monitoring changes proposed by MRC must be approved, in writing, by the Department.

7. MRC shall utilize air monitoring and quality assurance procedures which are equal to or exceed the requirements described in the Montana Quality Assurance Manual, including revisions, the EPA Quality Assurance Manual, including revisions, 40 CFR Parts 53 and 58 of the Code of Federal Regulations, and any other requirements specified by the Department.

8. MRC shall submit quarterly data reports within 45 days after the end of the calendar quarter and an annual data report within 90 days after the end of the calendar year. The annual report may be substituted for the fourth quarterly report if all the quarterly information is included in the report.

9. The quarterly report shall consist of a narrative data summary and a data submittal of all data points in AIRS format. This data may be submitted in ASCII files on 3½" or 5½" high or low-density floppy disks, in IBM-compatible format, or on AIRS data entry forms. The narrative data summary shall include:

a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site location in relation to the refinery and the general area,

b. A hard copy of the individual data points,

c. The quarterly and monthly means for wind speed,

d. The first and second highest 24-hour concentrations for SO_2,

e. The first and second highest three-hour concentrations for SO_2,

f. The first and second highest hourly concentrations for SO_2,

g. The quarterly and monthly wind roses,

h. A summary of the data collection efficiency,

i. A summary of the reasons for missing data,

j. A precision and accuracy (audit) summary,

k. A summary of any ambient air standard exceedances, and

l. Calibration information.

10. The annual data report shall consist of a narrative data summary containing:

a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site location in relation to the refinery and the general area,

b. A pollution trend analysis,

c. The annual means for SO_2 and wind speed,

d. The first and second highest 24-hour concentrations for SO_2,

e. The first and second highest 3-hour concentrations for SO_2,

f. The first and second highest hourly SO_2 concentrations,

g. The annual wind rose,

h. An annual summary of data collection efficiency,

i. An annual summary of precision and accuracy (audit) data,

j. An annual summary of any ambient standard exceedance, and

k. Recommendations for future monitoring.

11. The Department may audit (or may require MRC to contract with an independent firm to audit) the air monitoring network, the laboratory performing associated analyses, and any data handling procedures at unspecified times. On the basis of the audits and subsequent reports, the Department may recommend or require changes in the air monitoring network and associated activities in order to improve precision, accuracy and data completeness.

APPENDIX F
ESTIMATE OF EMISSIONS DUE TO INCINERATION OF SOUR WATER STRIPPER OFF GASES

Required Data[1]:

1. Feed Flow Rate - Totalized Flowmeter.

2. Feed H_2S Concentration - Standard Methods 18th ED 4500-S^{2-}D, or other method approved by the Department.

3. Feed NH_3 Concentration - Standard Methods 18th ED 4500-NH_3C, or other method approved by the Department.

Calculations:

1. (Feed Flow Rate, lb/hour)*(Feed Sulfide Concentration) = lb/hour H_2S Incinerated

2. (Feed Flow Rate, lb/day)*(Feed Ammonia Concentration) = lb/day NH_3 Incinerated

3. lb/hour H_2S Incinerated * 64/34 = lb/hour SO_2 Emitted

4. lb/day NH_3 Incinerated * 46/17 * 0.5 = lb/day NO_2 Emitted

[1] The effluent (bottoms) stream flow rates from the SWS units are not required to be monitored. The effluent (bottoms) wastewater stream flow rate shall be assumed to be equivalent to the inlet flow rate for calculating SO_2 and NO_x emissions.

Sampling and analysis of sour water stripper (SWS) effluent from the HTU SWS (for analysis of sulfide and ammonia) and from the old SWS (for analysis of sulfide) are not required. The effluent concentrations will be assumed to be zero for calculating SO_2 and NO_x emissions.

APPENDIX G
FUEL GAS FLOWMETER CALIBRATION AND QUALITY ASSURANCE PROCEDURES

1. Use the procedures in the following standards for flowmeter calibration or flowmeter design, as appropriate to the type of flowmeter:

   ASME MFC-4M-1986 (Reaffirmed 1990), "Measurement of Gas Flow by Turbine Meters,"

   American Gas Association Report No. 3, "Orifice Metering of Natural Gas and Other Related Hydrocarbon Fluids, Part 1: General Equations and Uncertainty Guidelines" (October 1990 Edition), Part 2: "Specification and Installation Requirements" (February 1991 Edition) and Part 3: "Natural Gas Applications" (August 1992 edition), (excluding the modified flow-calculation method in Part 3)

   ASME MFC-7M-1987 (Reaffirmed 1992), "Measurement of Gas Flow by Means of Critical Flow Venturi Nozzles,"

2. The Department may also approve other ASME standards or other procedures for flowmeter calibration or flowmeter design. Document other procedures, the equipment used, and the accuracy of the procedures in the monitoring plan. If the flowmeter accuracy exceeds 2.0% of the upper range value, the flowmeter does not qualify for use.

3. Alternatively, a fuel flowmeter used for the purposes of this part may be calibrated or recalibrated at least annually by comparing the measured flow of a flowmeter to the measured flow from another flowmeter that has been calibrated or recalibrate during the previous 365 days, using a standard listed in item 1 or 2 or of this Attachment. Any secondary elements, such as pressure and temperature transmitters, must be calibrated immediately prior to the comparison. Perform the comparison over a period of no more than 7 consecutive unit-operating days. Compare the average of three fuel flow readings for each meter at each of three different flow levels, corresponding to (1) normal full operating load, (2) normal minimum operating load, and (3) a load point approximately equally spaced between the full and minimum operating loads. Calculate the flowmeter accuracy at each of the three flow levels using the following equation:

   $$ACC = [R - A]/URV * 100$$

   Where:
   ACC= Flowmeter accuracy as a percentage of the upper range value.
   R= Average of the three flow measurements of the reference flowmeter.
   A= Average of the three measurements of the flowmeter being tested.
   URV= Upper range value of fuel flowmeter being tested (i.e., maximum measurable flow).

4. If the flowmeter accuracy exceeds 2.0% of the upper range value at any of the three flow levels, either recalibrate the flowmeter until the accuracy is within the performance specification, or replace the flowmeter with another one that is within the performance specification. Notwithstanding the requirement for annual calibration of the reference flowmeter, if a reference flowmeter and the flowmeter being tested are within 1.0% of the flow rate of each other during all in-place calibrations in a calendar year, then the reference flowmeter does not need to be calibrated before the next in-place calibration. This exception to calibration requirements for the reference flowmeter may be extended for periods up to 5 calendar years.

5. Recalibrate each fuel flowmeter to a flowmeter accuracy of 2.0% of the upper range value prior to use under this part at least annually, or more frequently if required by manufacturer specifications. Perform the recalibration using the procedures in item 1, 2, or 3 of this Attachment.

6. For orifice-, nozzle-, and venturi-type flowmeters, recalibrate the flowmeter, following each calendar quarter using the procedures in item 7 of this Attachment. In addition, re-calibrate the flowmeter whenever the fuel flowmeter accuracy, during a calibration or test, is greater than 1.0 percent of the upper range value, or whenever a visual inspection of the orifice, nozzle, or venturi identifies corrosion since the previous visual inspection.

7. For orifice-, nozzle-, and venturi-type flowmeters that are designed according to the standards in item 1 of this Attachment, satisfy the calibration requirements of this Attachment by calibrating the differential pressure transmitter or transducer, static pressure transmitter or transducer, and temperature transmitter or transducer, as applicable, using equipment that has a current certificate of traceability to NIST standards. In addition, conduct a visual inspection of the orifice, nozzle, or venturi at least annually.

APPENDIX H
QUALITY ASSURANCE REQUIREMENTS FOR CONTINUOUS H_2S CONCENTRATION MONITORING SYSTEM (CCMS) USED FOR COMPLIANCE DETERMINATION

1.0 Applicability and Principle

1.1 Applicability

These procedures are used to evaluate the effectiveness of quality control (QC) and quality assurance (QA) procedures and the quality of data produced by Montana Refining Company's (MRC) continuous H_2S concentration monitoring system (CCMS) that is used, in part, for determining compliance with the SO_2 emission limitations on a continuous basis as specified in the permit. These QA/QC procedures have been written using 40 CFR 60, Appendix F, and Performance Specification 2 and 7 in Appendix B as guidance. The QA/QC procedures in 40 CFR 60, Appendix F, cannot be used for MRC's CCMS because the H_2S concentration in the refinery fuel gas exceeds the maximum H_2S concentration of 300 ppm for which the procedures can be effectively applied.

This procedure specifies the minimum QA requirements necessary for the control and assessment of the quality of CCMS data submitted to the Department of Environmental Quality (Department).

The CCMS used by MRC shall be a Houston Atlas Model 722R/102 hydrogen sulfide analyzer with sample metering valve, or equivalent. The continuous fuel gas flow rate meter shall meet the specifications outlined in the permit and the Fuel Gas Flowmeter Calibration and Quality Assurance Procedures outlined in Appendix H, unless another method is approved by the Department.

Data collected as a result of QA and QC measures required in this procedure are to be submitted to the Department. The data is to be used by both the Department and MRC in assessing the effectiveness of the CCMS QA and QC procedures in the maintenance of acceptable CCMS operation and valid emission data.

1.2 Principle

The QA procedures consist of two distinct and equally important functions. One function is the assessment of the quality of the CCMS data by estimating accuracy. The other function is the control and improvement of the quality of the CCMS data by implementing QC policies and corrective actions. These two functions form a control loop: when the assessment function indicates the data quality is inadequate, the control effort must be increased until the data quality is acceptable. In order to provide uniformity in the assessment and reporting of data quality, this procedure explicitly specifies the assessment methods for response drift and accuracy.

2.0 Definitions

2.1 Continuous H_2S Concentration Monitoring System (CCMS). The total equipment required for the determination of a fuel gas H_2S concentration, including the data recorder.

2.2 Data Recorder. That portion of the CCMS that provides a permanent record of the analyzer output.

2.3 Span Value. The upper limit of a gas concentration measurement range for the Continuous H_2S Concentration Monitoring System (CCMS) used and which can be certified. In the case of MRC's monitor, the span value is 100,000 ppm H_2S (10% H_2S).

2.4 Zero and High-Level Values. The CCMS response values related to the source specific span value. Determination of zero and high-level values are, in the case of MRC's monitor, defined as 0 ppm H_2S (0% H_2S) and 50,000 ppm H_2S (5% H_2S), respectively.

2.5 Calibration Drift (CD). The difference in the CCMS output reading from a reference value after a period of operation during which no unscheduled maintenance, repair or adjustment took place. The reference value shall be supplied by a certified cylinder gas.

2.6 Relative Accuracy (RA). The absolute mean difference between the gas concentration or emission rate determined by the CCMS and the value determined by the SO_2 emission tests plus the 2.5% error confidence coefficient of a series of tests divided by the mean of the SO_2 emission tests or the applicable emission limit.

2.7 Hourly Average. Hourly average means an arithmetic average of all Valid and complete data points (complete monitor cycle) in the hour. Ten (10) Valid and complete data points are required to determine an Hourly Average.

2.8 Valid. Valid means data that is obtained from a monitor or meter serving as a component of the CCMS that meets the applicable specifications, operating requirements, and QA and QC requirements of this Attachment.

3.0 QC Requirements

MRC must develop and implement a QC program. As a minimum, the QC program must include written procedures that should describe in detail, complete, step-by-step procedures and operations for each of the following activities:

1. Calibration of CCMS.

2. CD determination and adjustment of CCMS.

3. Preventive maintenance of CCMS (including spare parts inventory).

4. Data recording, calculations, and reporting.

5. Accuracy audit procedures including sampling and analysis methods.

6. Program of corrective action for malfunctioning CCMS.

As described in Section 5.2, whenever excessive inaccuracies occur for three consecutive months, the source owner or operator must revise the current written procedures or modify or replace the CCMS to correct the deficiency causing the excessive inaccuracies. These written procedures must be kept on record and available for inspection by the Department.

4.0 Calibration Drift (CD) Assessment

4.1 CD Requirement

MRC must check, record, and quantify the zero (or low-level value between 0 and 20% of span value) and span (50 to 100% of span value) calibration drifts at least once daily (approximately 24 hours) in accordance with the method prescribed by the manufacturer. The CCMS calibration must, as minimum, be adjusted whenever the daily zero (or low-level) CD or the daily high-level CD exceeds 5% of the scale (5,000 ppm H_2S, 0.50 % H_2S).

4.2 Recording Requirement for Automatic CD Adjusting Monitors.

Monitors that automatically adjust the data to the corrected calibration values (e.g., microprocessor control) must be programmed to record the unadjusted concentration measured in the CD prior to resetting the calibration, if performed, or record the amount of adjustment.

4.3 Criteria for Excessive CD

If either the zero (or low-level) or high-level CD result exceeds 5,000 ppm H_2S for five, consecutive, daily periods, the CCMS is out-of-control. If either the zero (or low-level) or high-level CD result exceeds 10,000 ppm H_2S during any CD check, the CCMS is out-of-control. If the CCMS is out-of-control, then take necessary corrective action. Following corrective action, repeat the CD checks.

4.3.1 Out-Of-Control Period Definition

The beginning of the Out-of-Control Period is the time corresponding to the completion of the fifth, consecutive, daily CD check with a CD in excess of 5,000 ppm H_2S, or the time corresponding to the completion of the daily CD check preceding the daily CD check that results in a CD in excess of 10,000 ppm H_2S. The end of the Out-of-Control Period is the time corresponding to the completion of the CD check following corrective action that results in the CD's at both the zero (or low-level) and high-level measurement points being within the corresponding allowable CD limit (i.e., 5% of scale and 10% of scale).

4.3.2 CCMS Data Status During Out-of-Control Period

During the period the CCMS is out-of-control, the CCMS data may not be used in calculating emission compliance nor be counted towards meeting minimum data availability as required in the permit.

4.4 Criteria for Out-of-Range

If the monitor measures a fuel gas H_2S concentration in excess of 100,000 ppm H_2S (10% H_2S) at any time, the CCMS is out of range. If the CCMS is out of range, perform the necessary corrective action. Following corrective action, repeat the CD checks. A manual zero/span shall be conducted after an Out-of-Range as verification of proper operation.

4.4.1 Out-Of-Range Period Definition

The beginning of the Out-of-Range Period is the time corresponding to the first monitor reading in excess of 100,000 ppm H_2S. The end of the Out-of-Range Period is the time corresponding to the last monitor reading in excess of 100,000 ppm H_2S following corrective action that results in the monitor reading being below 100,000 ppm H_2S.

4.4.2 CCMS Data Status During Out-of-Range Period

During the period the CCMS is out of range, the CCMS data may not be used in calculating emission compliance nor be counted towards meeting minimum data availability as required in the permit.

4.5 Data Recording and Reporting

All measurements from the CCMS must be retained on file by the source owner for at least 5 years. However, emission data obtained on each successive day while the CCMS is out of control or out of range may not be included as part of the minimum monthly data requirement of the permit nor be used in the calculation of reported emissions for that period.

5.0 Data Accuracy Assessment

5.1 Auditing Requirements

The CCMS must be audited at least once each calendar quarter. Successive quarterly audits shall occur no closer than 2 months from the previous audit. The audits shall be conducted as follows:

5.1.1 Cylinder Gas Audit (CGA).

A CGA shall be conducted at least once each calendar quarter. To conduct a CGA:

(1) Challenge the CCMS with an audit gas of known concentration at two points within the following ranges:

1. 15% - 20% of span value (15,000 - 20,000 ppm H_2S, 1.5% - 2% H_2S)
2. 30% - 35% of span value (30,000 - 35,000 ppm H_2S, 3.0% - 3.5% H_2S)

Challenge the CCMS three times at each audit point, and use the average of the three responses in determining accuracy. Use separate audit gas cylinders for audit points 1 and 2. Do not dilute gas from an audit cylinder when challenging the CCMS. The monitor should be challenged at each audit point for a sufficient period of time to assure adsorption-desorption of the CCMS sample transport surfaces has stabilized. The difference between the actual concentration of the audit gas and the concentration indicated by the monitor is used to assess the accuracy of the CCMS.

(2) Operate the monitor in its normal sampling mode (i.e., pass the audit gas through all filters, scrubbers, conditioners, and other monitor components used during normal sampling, and as much of the sampling probe as is practical). At a minimum, the audit gas should be introduced at a point upstream of the sample filter/fast sweep assembly and sample cooler and, if possible, pass the audit gas through the probe, sample line, and liquid knock out pots.

(3) Use audit gases that have been certified by comparison to National Institute of Standards and Testing (NIST) gaseous Standard Reference Materials (SRM's) or NIST/EPA approved gas manufacturers' Certified Reference Materials (CRM's) (See Citation 1) following EPA Traceability Protocol No. 1 (See Citation 2) or other gases approved by the Department. As an alternative to Protocol No. 1 audit gases, CRM's may be used directly as audit gases. A list of gas manufacturers that have prepared approved CRM's is available from EPA at the address shown in Citation 1. Procedures for preparation of CRM's are described in Citation 1. Procedures for preparation of EPA Traceability Protocol No. 1 materials are described in Citation 2.

5.1.3 Other Alternative Audits

Other alternative audit procedures may be used as approved by the Department.

5.2 Excessive Audit Inaccuracy

If the relative accuracy, using the CGA exceeds the criteria in section 5.2.3, the CCMS is out of control. If the CCMS is out of control, take necessary corrective action to eliminate the problem. Following corrective action, the source owner or operator must audit the CCMS with a CGA to determine if the CCMS is operating within the specifications. If audit results show the CCMS to be out of control, the CCMS operator shall report both the audit showing the CCMS to be out of control and the results of the audit following corrective action showing the CCMS to be operating within specifications.

5.2.1 Out-Of-Control Period Definition

The beginning of the Out-of-Control Period is the time corresponding to the completion of the sampling for the CGA. The end of the Out-of-Control Period is the time corresponding to the completion of the sampling of the subsequent successful audit.

5.2.2 CCMS Data Status During Out-Of-Control Period

During the period the monitor is out of control, the CCMS data may not be used in calculating emission compliance nor be counted towards meeting minimum data availability as required in the permit.

5.2.3 Criteria for Excessive Audit Inaccuracy

The criteria for excessive inaccuracy for the CGA, is +/- 15.0 percent of each average audit value (i.e., 15% of span, +/- 2,250 ppm @ 15,000 ppm; 20% of span, +/- 3,000 ppm @ 20,000 ppm; 30% of span, +/- 4,500 ppm @ 30,000 ppm; and 35% of span, +/- 5,250 ppm @ 35,000 ppm).

5.3 Criteria for Acceptable QC Procedure

Repeated excessive inaccuracies (i.e., out-of-control conditions resulting from the quarterly audits) indicate the QC procedures are inadequate or that the CCMS is incapable of providing quality data. Whenever excessive inaccuracies occur for two consecutive quarters, the source owner or operator must revise the QC procedures (see Section 3) or modify or replace the CCMS.

6.0 Calculations for CCMS Data Accuracy

Use the following equation to calculate the accuracy for the CGA. Each component of the CCMS must meet the acceptable accuracy requirement.

$$A = [(Cm-Ca) /Ca] \times 100$$

where:

A = Accuracy of the CCMS, percent.
Cm = Average CCMS response during audit, ppm H_2S.
Ca = Average audit value (CGA certified value), ppm H_2S.

Example calculations for the CGA are available in Citation 3

7.0 Reporting Requirements

At the reporting interval specified in the permit, report for the CCMS the accuracy results from Section 6 and the CD assessment results from Section 4. Report the drift and accuracy information as a Data Assessment Report (DAR), and include one copy of this DAR for each quarterly audit with the report of emissions required in the permit.

As a minimum, the DAR must contain the following information:

1. Source owner or operator name and address.

2. Identification and location of the CCMS.

3. Manufacturer and model number of the CCMS.

4. Assessment of CCMS data accuracy and date of assessment as determined by the CGA described in Section 5, including the accuracy (A) for the CGA, the cylinder gases certified values, the CCMS responses, and the calculation results as defined in Section 6. If the accuracy audit results show the CCMS to be out of control, the CCMS operator shall report both the audit results showing the CCMS to be out of control and the results of the audit following corrective action showing the CCMS to be operating within specifications.

5. Results from the CGA as described in Section 5.

6. Summary of all corrective actions taken when CCMS was determined out of control or out of range, as described in Sections 4 and 5.

An example of a DAR format is shown in Figure 1.

8.0 Bibliography

1. "A Procedure for Establishing Traceability of Gas Mixtures to Certain National Bureau of Standards Standard Reference Materials." Joint publication by NBS and EPA-600/7-81-010. Available from the U.S. Environmental Protection Department. Quality Assurance Division (MD-77), Research Triangle Park, NC 27711.

2. "Traceability Protocol for Establishing True Concentrations of Gases Used for Calibration and Audits of Continuous Source Emission Monitors (Protocol Number 1)" June 1978. Section 3.0.4 of the Quality Assurance Handbook for Air Pollution Measurement Systems. Volume III. Stationary Source Specific Methods. EPA-600/4-77-027b. August 1977. U.S. Environmental Protection Department. Office of Research and Development Publications, 26 West St. Clair Street, Cincinnati, OH 45268.

3. Calculation and Interpretation of Accuracy for Continuous Emission Monitoring Systems (CCMS). Section 3.0.7 of the Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III, Stationary Source Specific Methods. EPA-600/4-77-027b. August 1977. U.S. Environmental Protection Department. Office of Research and Development Publications, 26 West St. Clair Street, Cincinnati, OH 45268.

Figure 1 - EXAMPLE FORMAT FOR DATA ASSESSMENT REPORT (DAR)

A. General Information

Period Ending Date: _____ Year
Company Name: Montana Refining Company

Plant Name: Great Falls Refinery

Source Unit No.: Refinery Fuel Gas System (Sour Fuel Mix Drum)

CCMS Manufacturer: Houston Atlas

Model No.: Model 722R/102

CCMS Serial No.: 5656

CCMS Type: Hydrogen sulfide (H_2S) analyzer with sample metering valve

CCMS sampling location: at its current location, upstream of boilers #1 and #2
CCMS span value: 100,000 ppm H_2S (10.0%)

CCMS Data Available (%): _____ Time in Compliance (%):

Date of Previous Audit:

CCMS Repairs or replaced components that affected or altered calibration values (include description and dates):
Responsible Official: _____ Date:

B. Accuracy Assessment Results from Cylinder Gas Audit (Complete A below for the CCMS).

If the quarterly audit results show the CCMS to be out-of-control, report the results of both the quarterly audit and the audit following corrective action showing the CCMS to be operating properly.

Montana Refining Company Hydrogen sulfide (H_2S) CCMS	Audit point 1 15% - 20% of span value	Audit point 2 30% - 35% of span value
Date of audit		
Cylinder ID number		
Date of certification		
Type of certification[2]		
Initial Cylinder Press. (psi)		
Final Cylinder Press. (psi)		
Ca = Certified audit value (ppm)		
CCMS response value (ppm) Run # 1		
CCMS response value (ppm) Run # 2		
CCMS response value (ppm) Run # 3		
Sum of Runs 1, 2, and 3		
Average CCMS response (ppm), Cm = Sum/3		
Accuracy percent, [(Cm-Ca)/Ca]*100		
Out of Control? (|Accuracy| > 15%)		
Comments:		

Technician: _____ Date:

[2] Example: EPA Protocol 1, CRM, or other

C. Monitor Out-of Control Status Documentation

Montana Refining Company - H_2S CCMS Out-of Control Status Documentation

Date and time of CD check or audit:

Type of assessment (check one): _____ CD check _____ Accuracy Audit

Type of CD check (zero or span):

CCMS response (%H_2S):

Reference value (%H_2S):

Calibration drift (%of scale):

Audit inaccuracy (% of reference value):

Date and time of beginning of out-of-control period :
Problem:
Date and time of corrective action:
Corrective action taken:
Date and time of CD check or audit after corrective action:
CCMS response after corrective action (%H_2S):

Calibration drift after corrective action (% of scale):
Audit inaccuracy after corrective action (% of reference value):
Date and time of end out-of-control period:
Number of hours of data invalidated:
Technician: Date: